BEGINSELEN DER BEELDENDE WISKUNDE

DOOR

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PRINCIPLES OF FORMATIVE MATHEMATICS

BY

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Editorial Introducton to *Formative Mathematics*

The Dutch phrase *beeldende wiskunde* literally means "formative mathematics." The adjective *beeldend* can mean "form-giving," "shaping," or "creative in form," and comes from *beelden* — "to form into an image," "to give shape." So, *beeldende wiskunde* is not mathematics that simply describes things, but mathematics that *forms* — that creates form within thought itself.

Traditional mathematics deals with forms that are already given — circles, lines, solids — as if they existed independently, waiting to be measured or defined. *Formative Mathematics*, on the other hand, looks deeper: it asks *how* forms come into being at all. It is an act of formation within consciousness — a creative process through which thought itself gives shape and order to the world we perceive.

Schoenmaekers defines thinking as a kind of movement between two poles — the relative and the absolute. He writes: "Thinking is: to reduce a fact of nature to *absoluteness*, in order to find that absoluteness again within the *relative* fact of nature."

This twofold movement — to *absolutise* and to *relativise* — is what makes thinking creative. It brings something new into being: a living relation between perception and idea. In *Formative Mathematics*, thinking doesn't simply copy reality; it re-creates it inwardly, following the guidance of universal law (*wetmatigheid*). Each genuine act of formative thought repeats, in miniature, the act of creation itself — the birth of form out of law.

For Schoenmaekers, this is why *Formative Mathematics* is creative rather than merely imaginative. Imagination can wander anywhere; it can invent freely, without structure or necessity. Creativity, however, means something more disciplined and profound: a participation in the same formative laws by which the universe itself unfolds. True creativity, in this sense, is "lawful freedom" — the freedom to shape in harmony with an inner awareness of universal order.

In Schoenmaekers' view, the thinker doesn't simply *contemplate* creation — he continues it. To think formatively is to think in the image of creation itself: to let the inner life of consciousness re-enact the formative rhythm of the cosmos. In this way, *Formative Mathematics* becomes a spiritual activity — a meeting point of art and science, of exactness and vision.

In short, *Formative Mathematics* is a creative science of form that unites precision with spiritual clarity. It is creative not because it invents new things, but because it re-enacts the formative laws that give rise to all visible structure. The formative mathematician becomes a participant in the creative act itself — translating the *absoluteness* of universal law into the *relativity* of visible form.

L. S. [1]

If mathematicians object to the name "formative mathematics" or say that my way of thinking "does not belong to mathematics," I can only reply that I have clearly stated on page 27: **1st**, what I understand by mathematics and **2nd**, why I call my way of thinking "mathematical." Moreover, I will be sincerely grateful for any honest comments or critiques.

I readily admit that my work is by no means "practical" in the usual, unreflective sense of the word. Formative mathematics is not "applicable" in any "field" of work.

However, those who thoroughly engage with my work will come to see the lifeless nature of most practical activities in our modern world. That insight is actually quite…practical. For it provides us with new possibilities for genuine thinking, feeling, and *living*. We *do* far too much and *live* far too little. Those who think in a formative-mathematical way will *do* less and *live* more. Thus, the practice of formative mathematics is contrary to the practice of non-formative [2] mathematics, which has led the modern person to do ever *more* and to live ever *less*.

Those who *sense* they are living too little and doing too much are in *need* of formative mathematics. Society has long been aware of this issue

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1) L. S. (*Lectori Salutem*) = "To the Reader: Greetings"

2) "non-formative" (*niet-beeldende*) refers to mechanistic or purely quantitative modes of thought.

but is reluctant to face it. Once this realization deepens into a stark recognition of its own profound lack of meaning, it will be forced to confront the truth, and then ….

Whether or not the author of this work remains prominent or if his name is still recognized is not of "practical" concern. What is essential is that humanity must understand that genuine thought is formative thought, and that formative thought can be precise and *communicable*.

This realization will eventually spread globally, suddenly emerging among many individuals, much like it has recently emerged among a few in little Holland. [1] We already know, apart from biological debates on mutation or hybridization theories, that new life forms arise *suddenly*. "Both mutation theory and hybridization theory suggest that new species appear fully formed, indicating that ordinary adaptation (Darwinian, M.S.) [2] does not apply." (Dr. J. P. Lotsy: *The Present Position of the Theory of Evolution* [3], p. 87).

Formative-mathematical thinking represents a new form of thinking. It does not negate the profound thoughts of ancient times, but what sets formative mathematics apart is its inherent *precision*, *verification*, *communicability*, and *power of formation*—qualities that are not confined to any specific field but are relevant to every individual with an active mind and a genuine quest for truth.

M. S.

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1) When Schoenmaekers writes of “a few in little Holland,” he is not referring to *De Stijl*, which did not yet exist, but to the small number of Dutch thinkers and artists who were spontaneously reaching similar “formative” insights.

2) Schoenmaekers adds "(Darwinian, M.S.)" within the quotation to signal that the *ordinary* meaning of "adaptation" refers specifically to the Darwinian sense of *gradual* adaptation. He thereby distinguishes his own metaphysical interpretation — based on *sudden*, creative transformation — from Darwin’s notion of *incremental* adjustment. This aligns him with Hugo de Vries and J. P. Lotsy’s “mutation theory,” and conceptually underpins his view that *beeldend-wiskundig denken* (formative-mathematical thought) represents a discontinuous, spontaneous leap in human consciousness.

3) *Het tegenwoordig standpunt der evolutieleer*, (1912).

I.

PRELIMINARY CONCEPTS.

Absolute and relative

We call something *absolute* when it excludes any degree of variation. We call something *relative* when it includes a degree of variation. For example, an absolute sphere is not "more or less" spherical, but simply *spherical*. The spherical shapes we find in nature are all relatively spherical because they all approach the absolute sphere to a greater or lesser extent. They are all spherical "by approximation" and not "roughly" spherical[1)]. A relative sphere remains fundamentally different from an absolute sphere.

The difference between absoluteness and relativity cannot, under any circumstances, be made gradual. In other words, the difference between absoluteness and relativity is essentially *fundamental*. Even if I make the relative sphere as round as possible, even if I carefully remove all the imperfections from its surface — the relative sphere will always remain relative. And this is not because I lack the means to transform the relative sphere into pure absoluteness, but because it is strictly impossible to gradually equalize the difference between absoluteness and relativity. We cannot move from relativity to absoluteness or from absoluteness

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1) Schoenmaekers distinguishes ***bij benadering*** (by approximation) from ***ongeveer*** (roughly) to separate two modes of approach to truth. *Bij benadering* implies formative thinking (*beeldend denken*): a conscious, formative flow of thought — governed by inner law rather than by chance — between the relative and the absolute. *Ongeveer* implies only a vague resemblance, without inner law or relation. Thus, when he writes "*bij benadering en niet ongeveer*" ("by approximation and not roughly"), he means that the natural forms we see are not merely "roughly" spherical, but strive lawfully toward the absolute sphere (*volstrekte bol*). Every true *approximation* in Formative Mathematics is therefore creative and intentional, not "rough": accidental or imprecise.

to relativity without a *sudden* transition.

The word "betrekkelijk" (relative) is a compound of the word "trekken" (to pull) in the sense of "to go gradually" (*geleidelijk gaan*). We say that a procession "voorbij trekt" (passes by) because its slow movement suggests the very opposite of "suddenness" (*plotselinge*). We might say of a train that it "departs" (*vertrekt*)— but not that it "passes by". A train pulling away slowly gives us the sense of gradualness; one that rushes past at full speed gives us the sense of suddenness. An older form of "to pull" is "tijen", from which the word "tijd" (time) comes. The idea of "passing by gradually" (*geleidelijk voorbij trekken*) is inseparable from the concept of "time" as *relative* time: a steady, regular, and easily measurable flow. [1)]

The word volstrekt (absolute) is related to strekken (to stretch). The "volstrekt" is "fully (and not "more or less") stretched out". Human thought naturally reaches towards the absolute — towards fixed constancy within the transient and relative nature of things. Yet because it's impossible to move from the relative to the absolute without a sudden leap, the absolute carries within it the idea of sudden change in addition to constancy. The absolute is inherently constant, while the relative is inherently changeable. The transition from

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1) Schoenmaekers' distinction between ***volstrektheid*** (absoluteness) and ***betrekkelijkheid*** (relativity) is foundational to his entire system. He defines the "absolute" not as an unreachable ideal but as a necessary conceptual pole — the pure, ungraded essence of form. The "relative" belongs to the empirical, measurable world of degree and approximation. His insistence that no gradual transition exists between them anticipates his later concept of the "logical leap" (*logische sprong*), the sudden act of thought by which the human mind apprehends the absolute within the relative.

the relative to the absolute, and from the absolute to the relative, is *sudden*. Human thought reaches out toward the absolute, and for that very reason it desires both constancy and sudden change — or “revolution.” Human thought feels unsettled in a purely relative context. It turns away from the exclusively relative both out of a longing for constancy — which finds nothing lasting in what is changeable — and out of a revolutionary urge that finds *gradual* change “tedious.” The personality of a person who is born a "thinker", and who distinguishes themself from others, is "spiritually mobile" (*beweeglijk*)[1] through a longing for constancy within the transient. A person who is *merely* "calm" may be a capable scholar, patient in study, but is not a "thinker". A person who is *merely* "spiritually mobile" is inconsistent; they may have fine, original “ideas,” but they too are not a "thinker". The temperament of the thinker is spiritually mobile through a longing for constancy within the transient.

Thinking.

What is thinking? — *Thinking is: to reduce a relative fact of nature to absoluteness, in order to find that absoluteness again within the relative fact of nature.*

Example: when we “think”of a sphere, we think

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1) *Beweeglijk* (spiritually mobile) means inwardly mobile: a disciplined, flexible movement of thought that can respond to and follow formative truth. It is not restlessness but a lawful inner activity that allows the mind to behold. For Schoenmaekers, this spiritual mobility is essential to Formative Mathematics.

of a perfect sphere. How do we arrive at that perfect sphere? By reducing a relative sphere — one we encounter in the natural world — to absoluteness.

This reduction to absoluteness (which we can express in one word as to "absolutise" (*absoluteeren*)) is the **first act** of thought. It begins, directly or indirectly, with sensory perception; but it does not remain there, for sensory perception shows us only relativities. From sensory perception thought "sets out," and comes to the absolute. Because this first act begins from sensory perception, it is inductive. Yet thinking is not completed in that first act. After we have reduced a relative fact of nature to absoluteness, we return, through thought, to the *relative*, and then *name* a particular object, such as a sphere, in which we recognize an approximation to the *absolute* sphere. This **second act** of thought we may call, in a single word, to "relativise" (*relativeeren*). Because this second act returns to the relative, sensory world of nature, it is deductive. The first and second acts of thought do not stand apart, but interpenetrate one another in complete unity. They live for and through each other, inwardly.[1)] All outward intentionality — for example, the deliberate aim of "proving" something — is foreign to the essence of thought. Thought, in its very nature, is both inductive and deductive.

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1) In Schoenmaekers' terminology, **naming** (*noemen*) is not a mere linguistic convenience but a "formative" (*beeldende*) act of thought. Naming thus completes the twofold rhythm of thinking:

Absolutising — the inductive ascent from the relative to the absolute;

Relativising — the deductive descent from the absolute to the relative, which includes ***naming***.

To **name** is therefore to make the absolute communicable. The **word** mediates between the absolute and appearance, between pure form and concrete reality.

This principle of the word as formative mediation had already been introduced in *Christosophie* (1911) and developed in *Het Nieuwe Wereldbeeld* (1915).

The first act of thought is "to understand" (*begrijpen*). The second is "to behold" (*aanschouwen*), to behold *through the senses*. Thinking that merely understands is not genuine thinking but only "intellectual grasp." True understanding seeks to behold — making it fully and authentically human. Ancient mystics called this true understanding and the preparatory experiences leading to it *meditation*, and they referred to the resulting insight as *contemplation*. They practiced meditation to achieve contemplation, and while they did it in their own way, we must approach it in *our* own way. Nevertheless, the core of genuine thinking encompasses both meditation and contemplation. [2)]

Our definition [1)] of thinking captures how thinking naturally and spontaneously exists within us. It highlights the *inalienable* nature of thinking, which we cannot deny without also denying the concept of thinking itself. We are compelled by an inner, persistent drive to think as this definition describes; it is not something we can avoid. Most

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1) Philosophers often object to "definitions." A definition, in the strict philosophical sense, is a ready-made, permanently valid, non-growing verbal delimitation of a concept. I readily admit that such a definition cannot truly exist, because in actual revealed life every delimitation grows — even every verbal delimitation. Here I use the word "definition" in the sense of verbal characterisation. If such a characterisation characterises a living reality, it remains the same in essence, yet it does not exclude growth.

2) Schoenmaekers' ***aanschouwen***—translated here as "to behold"—denotes the second, intuitive act of true thinking: a direct, sensuous–spiritual vision of form. In this passage he compares it to the mystics' *contemplatie* (contemplation), but only analogically. The mystic's **contemplation** was the still vision that followed meditation; Schoenmaekers' **beholding** is a renewed, formative seeing within modern thought itself. Thus *aanschouwen* corresponds in structure to contemplation yet differs in character: it is not passive vision but active, spiritual perception—the creative completion of understanding (*begrijpen*).

tend to think in an "accidental" manner, without realizing that they are thinking in this specific way and not otherwise. Visual mathematics seeks to consciously and methodically guide us to perform what most people do by chance when they think. The validity of this definition cannot be intentionally "proven," as deliberate proof would interfere with the essence of thinking. Instead, the definition will be confirmed through its practical applications. As we develop and refine it more thoroughly, we will gain a clearer understanding of its accuracy and inherent clarity.

General concept and absolute concept.

Natural phenomena vary and resemble each other to varying degrees. This observation prompts us to organize these phenomena into "groups" based on their strong similarities. Within a "group," many items are categorized together because, while considering the relative nature of the phenomena and ignoring absolute properties, we notice that these things share an immediately “striking”, though still relative, resemblance. The concept used to encompass such a group of similar things is termed a "general" concept.

It's quite clear that a general

concept differs significantly from an absolute concept.

A general concept is a broad aggregation of various sensory experiences that individually do not group things together but rather present them as separate entities. For example, the general concept "horse" represents horses in a vague and broad sense, encompassing many animals without any sudden transition.

On the other hand, an absolute concept (such as "cube") is a highly specific and exact concept, associated with a clearly defined mental image. While an absolute concept also includes multiple instances, it does so differently from a general concept: it involves a sudden shift or "logical leap," which will be explained later.

An absolute concept requires a general concept as its basis, and it must be a very broad and inclusive one. Initially, an absolute concept starts as a vague and broad idea but becomes precise and sharply defined. For instance, the general concept "horse" is not broad enough to refine into an exact absolute concept. In contrast, the general concept "living organism" is sufficiently broad and can be refined into the precise concepts of organic line and organic ray. Later, we will describe these as elliptical line and elliptical ray.

General concepts help us organize the *material* we use for thinking:

the relative *data of nature*. [1] But they do not belong to thinking itself. Who, for instance, would call a biologist a "thinker" if he merely arranges living organisms — however clearly—within a "system"!

In contrast, absolute concepts are inherently tied to the process of thinking. A mathematician, for instance, is considered a thinker because his work involves absolute concepts.

General concepts are used to "compare": they deal with *relative* degrees of similarity or difference.

Absolute concepts are used to *truly* "distinguish": they express essential differences.

Impulse to think (*Denkdrift*).

We have come to understand that our human impulse to think serves two interrelated but distinct functions: **1st.** the "absolutizing" function, which reduces natural phenomena to an absolute form, and **2nd**. the "relativizing" function, which rediscovers that absoluteness by approximation in the relative phenomena of nature.

The first function arises from our impulse to think as *a feeling for language*. Language aims to make precise distinctions, which requires absolutizing. As long as we focus solely on relative *natural phenomena*, we can only make "more or less"

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1) ***natuurgegevens*** literally means the given facts of nature — that which is "given to us by nature," as data for perception and thought. Translating this as "**data of nature**" stresses the *given-ness* (what nature presents to thought); whereas translating this as "**natural phenomena**" stresses the *appearance* (what is perceived). **Example**: a tree. When you look at a tree, what is immediately perceived—its green colour, its height, its rustling—belongs to the realm of natural phenomena. These are *appearances*: the tree as it shows itself to sight and hearing. But when Schoenmaekers calls such things *natuurgegevens* (data of nature), he is not referring to the sensory appearance alone. He means: that which is given to us by nature prior to conceptual or formative determination — before it is named, judged or measured. It is given as a fact of existence, not yet shaped by thought or by art. The "given-ness" (*gegevenheid*)—

comparisons; in relative natural phenomena, everything is understood in terms of degrees of similarity or difference. However, when we move beyond mere comparison to making *essential* distinctions, we engage in the process of absolutizing. This process of precise and fundamental distinction activates our sense of language. The most fundamental and precise form of distinction is counting. Language achieves its fundamental precision through numbers. When a child's language hasn't reached the stage of counting, it is not fully developed language but just a series of unrefined sounds. Numbers represent the most fundamental and exact form of human absoluteness, and numbers are essentially language "in the making." How so? Is a number absolute? Isn't the essence of number "more or less"? No. Number is *absolute*. The number “five,” for instance, is not “approximately” five, or “more or less” five, but *absolutely* five. However, *measuring* "five" always involves approximation. We can never achieve absolute precision in measurement. The finer the instruments, the closer we come to accurate measurement, but absolute precision remains out of reach. Through measurement, we *approximate* the absolute number. "Measure" is how our thinking first learns to *be exact within the relative world*—our mind’s power to relate pure ideas to real things

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—thus denotes the passive reception of reality: the state in which something is present before it is formed in thought. Formative (*beeldend*) thinking does not accept these data as final. It proceeds from this given-ness and seeks the formative law (*wetmatigheid*) that determines the phenomenon through its structural relations (*verhoudingen*) — for example, vertical growth, circular spread, or rhythmic branching. In summary: ***natuurgegeven*** denotes what is *given* to thought (the data); ***beeldende wiskunde*** denotes what is *formed* through thought, namely the formative manifestation (*beelding*) of its law.

is the "starting point". Our combined sense for number (the absolute) and for measure (the relative) contain, in seed form, the full structure of our *impulse to think*. This inner seed unfolds into the sense for form that comes to life in language.

The *sense of number* serves as a foundation for precise language, while the *sense of measurement* provides a foundation for precise *form*. The relativizing aspect of our *impulse to think* is what we call our *sense of form* (*vorm*gevoel) [1] A *sense for language* and a *sense for form* together make up the complete and living *impulse to think*. Whoever thinks only through language *absolutises* alone and so becomes, at least in thought, one-sidedly *abstract*; such thinking loses its living connection with the reality of nature. On the other hand, someone who has only a *sense of form* may be able to "see" things but cannot articulate concepts precisely. This means they won't understand how natural forms relate to fundamental cosmic movements, such as the Earth's elliptical orbit. Such fundamental and regular movements cannot be seen; they can only be recognised through the expression of language. In the "complete" thinker, however, *sense of language* and *sense of form* work together as one.

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1) Not vorm***en***gevoel. Vorm***en***gevoel is “feeling for beautiful forms”, while *vorm*gevoel is feeling for the distinction of form. Vorm***en***gevoel remains preoccupied with what is relatively more or less beautiful; *vorm*gevoel "styles" toward absoluteness (*volstrektheid*). Schoenmaekers distinguishes ***vormen****gevoel* (“feeling for beautiful forms”) from ***vorm****gevoel* (“feeling for the distinction of form”). This is one of the most frequently misunderstood nuances in *Beginselen der beeldende wiskunde*. The former belongs to the relative domain of aesthetic judgment, in which forms are apprehended as more or less beautiful; the latter belongs to formative (*beeldend*) perception, in which forms are discerned according to their form-distinctions. *Vormgevoel* proceeds toward *volstrektheid* (absoluteness), transforming aesthetic feeling into exact formative insight. In this sense, feeling for the distinction of form is the foundation of all exact, constructive art and of *beeldende wiskunde* (Formative Mathematics) itself, in which form is determined through lawful relations (*verhoudingen*). This distinction anticipates the development of *De Stijl*, in which art no longer proceeds from beauty, but from formative exactness: geometry as the visible manifestation (*beelding*) of inner law (*wetmatigheid*).

The logical leap.

The transition from the relative to the absolute and from the absolute to the relative can be accompanied by gradual preparation (e.g., gradual thinking), but the transition itself happens suddenly, as we have noted. This leap "springs" from our inner experience and is therefore impossible outside of our own "original" thinking. For example, when we want to explain to children that the Earth, despite its many mountains and valleys, can still be called "round," we can help them prepare for the transition from relative roundness to absolute roundness by showing them that the heights of the mountains are very small compared to the size of the Earth. However, once they understand that the Earth "approaches" perfect roundness and can therefore be called round, their natural thinking makes a sudden, original leap.

This example is sufficient to show that every "leap" in our thinking does not have to be arbitrary but can be very logical. Everyone will find us logical if we say that the Earth is "round" when reduced to its absolute form. We all make "leaps" in our thinking as soon as we think originally. This does not, of course,

mean that every leap in thinking is logical. Far from it. If someone were to suddenly reduce the shape of the Earth to a cube and call the Earth "approximately" a cube, we would all certainly protest in the name of logic—even though the Earth can neither be reduced *gradually* to perfect roundness nor to a perfect cubical form.

"In the name of logic" means: in the name of our human *impulse to think*.

When is the transition from the relative to the absolute, or from the absolute to the relative, considered *logical*? When might this transition be deemed *illogical*? This is not something that can be answered by general rules, as it involves the essence of our personal, free-thinking process. Each person's *impulse to think* must evaluate each specific situation individually. While one person's *impulse to think* may be more spontaneous and refined compared to another's, it remains a deeply personal and irreplaceable aspect of their inner life. Although a person's *impulse to think* can benefit from the thinking of others, it ultimately functions independently if it is to function at all.

Is there no uniformity possible in the thinking of multiple people? Certainly there is. But not in the sense that a group of people could think, live thinking, according to identical, established standards. Uniformity in our thinking

can indeed occur in the *results* of our thinking. For example, this is evident in a "language." People acquire their native language through a combination of free, spontaneous, personal engagement and the influence of their parents' speech. This process results in a natural uniformity: a single language shared by many speakers. In the same way, our individual, spontaneous intelligence can produce a fundamentally uniform outcome: a coherent understanding of the visual and mathematical aspects of the world. When we reach this uniform outcome, we become "intellectual kin," while still maintaining each person's unique, original thought process.

Such uniformity in free thinking is possible because the *formative principle* behind these outcomes, our *impulse to think*, is a shared aspect among all humans despite individual differences in thought. This unity is not "created" by imposed standards of thinking; rather, it is deeply inherent in human nature. Despite varying perspectives, people will always strive to communicate their insights to one another because they are compelled to believe in this fundamental unity, which allows them to understand each other due to an inborn, inalienable natural instinct.

Proving and indicating.

"Proving," *in the strict sense*, is an intellectual "coercion"

exerted with the deliberate aim of making someone accept a particular opinion. If, for example, I were accused of committing a murder at a certain time and place, and could prove my "alibi" through witness testimony, I would thereby "prove" my innocence — compelling the judge to acquit me. Proof, in the strict sense, being a form of compulsion, can never lead to inner insight; it deals only with external facts. It is quite possible that an inner insight might point to me as the true perpetrator of a murder that, outwardly, I did not commit; that is quite possible, even though I can prove beyond doubt that the external act of that murder was carried out by someone else. [1)]

Can insight, then, never be made real? Yes — but not by proving, rather by indicating. “Indicating,” in the strict sense, means drawing attention — entirely free from any deliberate attempt to compel. To indicate is to express an opinion unforcedly, assuming that another person wishes to hear it. In this “indicating,” we likewise seek a harmony of opinion, yet this happens naturally, without effort or contrivance — both for the one who indicates and for the one who listens. Indicating may also be external, but it is never a form of compulsion: for example, when I outwardly point someone along a path. It *can* be external, but it is not necessarily so. There is also an essentially *inner* indicating: an unforced communication of an insight, given in the assumption

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1) When Schoenmaekers says “*It is quite possible that an inner insight might point to me as the true perpetrator of a murder that, outwardly, I did not commit,*” he’s not talking about an unlawful criminal act, but *spiritual* causality — the idea that *inward* attitudes or *formative* impulses can be the true origin of outer events, even when one’s hands are clean. *Proof* concerns *external* fact; *insight* reveals the *inner* formative cause. In this sense, the “real murderer” is the one whose *inner* act corresponds to the deed, even if his hands are clean. For example: suppose a philosopher, scientist, or statesman creates an ideology or policy that indirectly leads to violence or oppression, even though he personally commits no crime. Later reflection could bring the painful recognition: “My thought shaped the form of that event.” In that sense, the *inner* act of formation (the *formative* idea) was the real “murderous” cause.

that another person wishes to hear that communication. In this inner indicating — or "explaining" — I surrender myself to my spontaneous *impulse to think* and let it speak, until it speaks clearly both for myself and for others who wish to listen freely. When others, in this way, arrive at a clearer understanding, I have "compelled" them to nothing; I have simply made my own expression so lucid and simple that it has become self-evident, and thus connects naturally with the free impulse to think in others. In this way, a true explanation proves itself true through its own clarity.

Pure mathematics is insight. *Formative* mathematics is *formative* insight. Mathematics proves nothing; it indicates — and precisely for that reason it is mathematics. What is called “proof” in mathematical textbooks is not proof *in the strict sense*, not an intellectual "coercion", but a free and liberating act of indication, explanation, or clarification.

Because pure mathematics gives "insight" and is free from every kind of compulsion — even intellectual compulsion — the common expression “mathematical proof” is, strictly speaking, a contradiction.[1)] Why, then, is that expression so often used? Because untrained thinking associates the highest degree of certainty with what it calls a “proof.” Yet mathematics does indeed provide complete *human* certainty — not *external* certainty concerning an outward, demonstrated “fact,” but the *inner certainty*, the "assurance", that comes

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1) Schoenmaekers argues that since a "proof" is a form of intellectual *compulsion*, whereas "mathematics" is a form of *free* insight, then to speak of a "mathematical proof" is to say "a *compulsory* demonstration of a *free* insight" - which is a contradiction in terms. True mathematics, for him, doesn’t *force* the mind to see; it *lets* the truth become self-evident through the inner order ("law") of visible expression ("form").

from clear insight. The absolute validity of, for example, the Pythagorean theorem can never truly be "proven." However, no one with clear insight has ever doubted it. We are inwardly assured of its unconditional validity — *freely*, and through our *own* insight.

Internal and external and inner (and outer).

When dust rises into the air, we instinctively close our eyelids to protect our eyes — and only afterwards do we think about what we did when we closed them. Such a spontaneous, natural movement is called a reflex action. It is unintentional yet reasonable; and only after its occurrence can we know precisely what its meaning or purpose was.

The living (not the technically "constructed") words of a language are born in the same way as reflex actions. They are full of unintentional and rational meaning, but only after their birth can we know that meaning precisely. The more attentively and honestly we listen to the living words, the more clearly they will speak to us, until their meaning stands out sharply, suddenly, as a kind of revelation. When listening to these born words, we test and assist ourselves in many ways (entymology, comparing synonyms, comparing words from different languages, and, above all, through precise figures [1)] that

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1) **Figure** — not a decorative *illustration* or a technical *diagram*, but a precise formative configuration, revealing the inner law of a concept.

For example: the *circle* is the exact figure that gives visible shape to the word *rond* (round); a *straight line* visibly expresses the word *recht* (straight, right, upright); the *angle* or *corner* gives visible shape to the transition or difference implied by the word *hoek* (angle, hook); the *balance line* or *beam* shows the meaning of *evenwicht* (equilibrium); and the *Pythagorean triangle*—with its 3 : 4 : 5 proportion—-gives visible shape to the *harmonie* (harmony) of magnitudes.

give visible shape to a word's meaning). But the decisive principle in experiencing the correct and living meaning of a word in our one human thinking instinct, which deepens and sharpens our sense of language and form.

In our language use, terms like “inwendig” (internal) and “uitwendig” (external)", or “innerlijk” (inner) and “uiterlijk” (outer) were born are not intentionally created, emerging spontaneously as natural reflexes. We often misuse these terms—I have done so myself in the past. But when we listen attentively to the difference between inwendig (uitwendig) and innerlijk (uiterlijk), a wisdom is “indicated” to us—so self-evidently simple that we cannot help but recognise it through our own pure inward *impulse to think*.

Listen to the words themselves:

“The *inner (innerlijke)* must be distinguished from the *internal (inwendige)*. The "internal" is hidden from our eyes by its outer covering and can be made visible by removing or peeling away the exterior. Thus, for example, the skeleton is an internal aspect of the human being: cut a person open, and the skeleton becomes visible. The "inner", however, can never be made visible by removing an exterior; on the contrary, it becomes visible precisely at the outermost exterior, or the "surface". At the surface the inner can be seen—if we are able to contemplate that surface well, carefully, and

entirely naturally. For the natural surface of a reality is the natural and complete expression of its inwardness. The inner life of a human being, for example, cannot be made visible like the skeleton, by opening the surface of the body, but only by seeing—and letting others see—that body's surface carefully, attentively, and entirely naturally. Good portrait painters know this: they reveal to us the innermost life of their model by teaching us to see the outward gesture (the expression of the eyes, the lines of the face, and so forth.)"

(*Het Nieuwe Wereldbeeld* , pp. 3, 4).

The distinction between inwendig (uitwendig) and innerlijk (uiterlijk) is of the greatest importance in Formative Mathematics. To explain this further, consider these related pairs of concepts:

Representation and Expression. — Outwardness is the expression (*uitbeelding*) of inwardness (*innerlijkheid*). It is "formation" (*beelding*) in the strict sense. A very fundamental *conceptual illustration* of expression is the circle. The outer aspect of a circle is its circumference, while its inner aspect consists of the radii together with the centre. The centre is the inmost inwardness — the origin from which the whole circle is born. From the origin, the entire circle rounds out, forms itself outward, expresses itself. And because the essence of the circle is expression, we can know that essence only through expressive power within our *impulse to think*. We re-enact the relative circle

that we find in natural reality within and through our absolutising and formative power of thought — and in this way we come to know the essence of the circle. If we only talk about the circle without re-enacting its birth within our thinking, we don't "know" the circle as expression. If we truly wish to know the circle as expression, it must be reborn within us in an original act of thought. For understanding externalities and internalities, such a rebirth within us is not necessary. Externalities and internalities are grasped simply by receiving and observing. That act of mere reception and observation is a purely representational (*afbeeldende*) function of the intellect — as lifeless and mechanical as printing a photograph. A physician, for example, knows the internal skeleton of a human being and the external tissue surrounding it in this purely representational way. His knowledge has nothing to do with expression (*uitbeelding*) born of inwardness. Now I am well aware that the difference between external–representational and outer–expressive is itself only relatively found again in relative natural phenomena. In the data of nature, all inwardness is more or less inner and more or less internal; and likewise, all outwardness is more or less outer and more or less external. But if we wish to come to a conscious understanding of relative natural phenomena, we must first reduce them to their absolute forms through conscious thought.

Inspection and i*nsight* — When we look through something external, we come to see what lies within it — we "inspect" (*inzage*) its inner side. For example, whoever can look past all the outward display of a merchant's business and examine the account books gains inspection of those books. But it is clear that such inspection alone never leads to "insight" (*inzicht*). Looking into what is internal may serve as a preparation for insight, yet insight itself remains something essentially different. Our knowledge becomes true insight only when we recognise an outer reality as the outer expression of an inner reality — when the two are felt *as one*. Only then do we truly understand: when, in an outer appearance, we become consciously aware of the inner life that reveals itself through it. This distinction leads us naturally to the next pair of ideas:

Overview and *penetrative insight* — Whoever knows how to order externalities and internalities properly can survey them — can gain an "overview" (*overzicht*). The "systematics" of biology, for example, gives such an overview. But with externalities and internalities alone, we can never — under any circumstances — attain *penetrative insight* (*doorzicht*). An overview may indeed help as a preparation for penetrative insight, but penetrative insight itself remains essentially different from an overview. Our knowledge becomes true penetrative insight only insofar as we recognise a particular outer appearance as a particular expression (*uitbeelding*) of the Life that *is* the Universe (*Heelalleven*).
Intellect and *reason* — The distinction between

"intellect" (*verstand*) and "reason" (*rede*) has, in principle, already been indicated when we spoke of "general" and "absolute" concepts. The intellect (understanding) is a preparatory activity of our thinking — an activity through which we arrange our material of thought (relative data of nature) according to the differences and resemblances that we find before our eyes and within reach. The intellect underlines difference and resemblance in the relative data of nature. In doing so, it begins to separate and arrange these into groups, subgroups, and subdivisions. Such classification is an orderly division; yet it remains division — which may achieve an orderly overview, but not yet an insightful or penetrative unity. The intellect is, in its essence, dividing or analysing. And the intangible analysis of the intellect brings with it — at least in principle — the tangible analysis, the completed separation, in physical reality. A biologist, for instance, divides an animal organism with his dissecting knife and assigns names to its various components. Through the intellect there arises division, and therefore distance, within the naturally unified objective reality. Distance interrupts the action of part upon part in that natural unity. Through the distance between the parts, their mutual interaction or reciprocal movement ceases — "movement" (*beweging*) becomes "stasis" (*stand*). That is why the intellect is so aptly named: ver*stand* — "that which *stands* apart"; and the parts into which it dissects the one reality are therefore most fittingly called

its “constituent parts.” The sharper the intellect (*verstand*), the more it divides — the more deeply it cuts through, the more “precise” it becomes. The word precise itself is related to the Latin "praecidere", meaning “to cut off” or “to cut into pieces.” It is clear, then, that the intellect concerns itself only with externalities and internalities. Only externalities and internalities can be analysed into constituent parts. Outer and inner realities can indeed be distinguished, but never divided. The distinction between outer and inner immediately brings with it the insight and penetrative insight of the one life — indivisible despite all distinctions. For example, we can distinguish the outer and inner aspects of a circle; but the more consciously we make that distinction, the more clearly we perceive the indivisibility of its one, inner–outer being.

The preparatory activity of the intellect is therefore of the greatest importance for genuine thinking. Through its sharp separations, the intellect trains our *impulse to think* (*denkdrift*) in the art of making exact distinctions. Whoever refuses to pass through the discipline of strict intellectuality will never reach the clarity of a truly awakened life of thought. But thinking remains, in essence, something quite other than the intellectual acts of classifying and ordering. When we explicitly distinguish the power of thought from all mere intellectuality, we call it *reason* (*rede*). Reason both distinguishes and unites outer and inner. It is our impulse to think itself,

insofar as it presupposes and governs the intellect. Reason arises from our human inwardness and comes to expression — to outer manifestation — in many different forms. Reason is called “reason” (*rede*) because it "speaks" (*redet*), because it "says" (*zegt*) — in the essential sense of the word. Reason doesn't "talk" (*praat*); it "says" (*zegt*). And this is the essential difference between "saying" and "talking": we "say" words as a poet says verses — from within our human inwardness; but as soon as our speaking becomes mere "talking", we speak past our inwardness, however orderly that talking may be. Reason is poetic; it creates a life of concepts. "To say" in Latin is "dicere" — and this "dicere" still echoes in our word "dichter" (poet), as so many Latin words continue to resonate in the Germanic languages. Reason is poetic — and insofar as it has passed through the discipline of strict intellectuality, it shapes sharp, "exact" truth.

Precise and *exact* — The hard intellect is the cutting, dividing intellect — the "precise" intellect. It separates and arranges. Reason, however, is called to be "exact". The word "exact" comes from the Latin exagere, which means: to lead outward from within. Whatever proceeds from our inwardness and finds outward expression, in sharply differentiated language, is "exact". In ordinary speech we tend to use "precise" and "exact" interchangeably — but we should *not*. I confess that I too used to confuse these words frequently.

Strictly speaking, there is only one exact science: mathematics. It "speaks" numbers and finds measures. It is exact thinking in the strict sense — though, up to now, it has been only exact thinking in potential. Why only in potential? Because so far — at least insofar as it is exact — it has *remained* confined to number and measure, and therefore has not yet reached the exact and fully *realised* sense of language, nor the exact and fully *realised* sense of form, nor the exact and fully *realised* impulse to think. It is not yet formative — not yet expressive in the full sense — because it has not yet thought through, with exactness, the relationship of complete life: the relation between inwardness and outwardness.

Problem and *mystery* — A problem is "solved," while a mystery is "revealed." By "problem," we refer to any set of data that requires organization to achieve clarity. A problem is thus a set of data treated as inner and outer aspects, and the organizing or solving principle is the intellect. Solving problems is a preparatory intellectual activity; it is not thinking itself. Even in mathematics, solving problems is merely preparatory. Mathematical thinking itself involves developing insight and understanding.

"Mystery" means "hiddenness." In the strict sense, it is Nature herself. Nature is hiddenness — not in the unconditional

sense that her essence must always remain foreign to us, but in the conditional sense that she reveals herself only in an uncontrived, natural way to an uncontrived, natural humanity. A problem can be solved through deliberate effort and clever searching. A mystery remains a mystery because it eludes all deliberate effort and clever searching. Yet a true mystery of nature reveals itself only to those who are as natural and unforced as nature itself. A mystery is the relationship between outwardness and inwardness. It is outwardness as manifested inwardness, one with that inwardness. The revealed mystery is an outwardness that can be beheld and seen through.

Formative mathematics.

"Formative Mathematics" is a systematic whole of rational explanations that lead to the exact expression of formative relations.

A formative relation is the relation between inwardness and outwardness.

Formative mathematics is "mathematics" because it leads to the "exact" expression of relation. It is "formative" mathematics because it leads to the exact expression of the "formative" relation.

Formative Mathematics may also be called "positive mysticism." "Mysticism", because its object is the mystery.

“Positive”, because it posits or affirms itself as ”exact” knowledge.

All of this is now clear in principle. It becomes increasingly clear and validated through the further development of "formative mathematics".

Truth

The definition of human thinking is at the same time the definition of true thinking — and thus of our human *truth*. Whoever wavers and asks, “Is human thinking really *true*?” does not trust the human impulse to think itself. Such a person cannot hope for genuine *insight* or *penetrative insight* into reality, and will therefore remain a stranger to formative mathematics. Whoever does trust the human impulse to think defines human truth as human thinking itself: Truth is "the reduction of relative data of nature to absoluteness, in order to find that absoluteness again within relative data of nature."

The object of human truth is all outwardness, insofar as it becomes — through our insight and penetrative insight — *clear* outwardness: a clear expression of inward life. Formative–mathematical thinking therefore presupposes an unconditional reverence for essential "outwardness," for the essential surface of the data of nature: the "born" and not the "made", surface;

the unspoiled, the "pure", the "whole", the "holy" surface. A soul that lacks such reverence has no feeling for Formative Mathematics. Reverence for the born surface is purity of soul. “The pure in heart” are those who revere the born surface of the human body — and not that surface alone, but every surface through which the one Life becomes visible.

In formative mathematics it is completely fulfilled that “the pure in heart shall see God.” For their disposition of soul is the capacity that makes it possible for the human being to attain *insight* and *penetrative insight* into natural formation — as the single expression of the one formative, "creative", or "divine" Life.

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II.

LINE AND RAY.

Conceptual illustration.

We have come to know the circle as a deeply fundamental *conceptual illustration* (*begripvoorstelling*) of "expression" (*uitbeelding*) — that is, of "externalised inwardness" (*veruiterlijkte innerlijkheid*). In other words, we have recognised the circle as a fundamental *formative* conceptual illustration. We shall return to this illustration later, but first we must grasp the significance of formative conceptual illustration in general.

The absolutising act of formative thinking finds expression of the distinctive word — the immediate realisation of our sense of language. The relativising act of formative thinking finds expression in the formative contemplation of relative natural phenomena — the immediate realisation of our sense of form. But the relationship between these two acts of thought — their living unity — is the formative *conceptual illustration*. It is the grasp of the absolutising impulse to think within relative reality. It is insight into absoluteness and relativity as one: the consciousness of the absolute within the relative.

The formative *conceptual illustration* is, of course, something different from the *constructive drawing* — the "figure" — by which we render it visible to the senses on paper or on the board. Yet the figure remains the naturally given and entirely fitting means for testing and clarifying the conceptual illustration.

Formative thinking will quite naturally make use of it whenever it seeks to attain exactness. A dislike of the "figure" always goes hand in hand with a dislike of *exact* formative thinking. The formative figure is not merely a means of verification, but the immediate outward expression of the conceptual illustration itself. The conceptual illustration is, by its very nature, form-giving — it traces outwardly the *figure* of its own inwardness. Hence the figure is not simply an example offered for clarification, nor a graphical representation that merely makes thinking easier — as when a physician records the rise and fall of temperature in a "fever chart". No — the formative figure is *expression*: the outwardness of an inward formative conceptual illustration, aligned with the illustration itself.

Line and ray.

From the circle figure (Fig. I) we can easily and reliably sharpen our shared conceptual illustration of line and ray — in other words, that figure gives us a verifiable and exact characterisation of what we all, more or less vaguely, understand by the words "line" and "ray".

The line is "supple" — flexibility is its very essence. The ray is "taut" — it cannot bend without ceasing to be a ray, without becoming a “bent line.”

The line “bends” around a centre, and is therefore "pliant". The ray “originates” from a centre — it makes the line to deviate; its very nature is the opposite of pliant. The ray is "rigid".

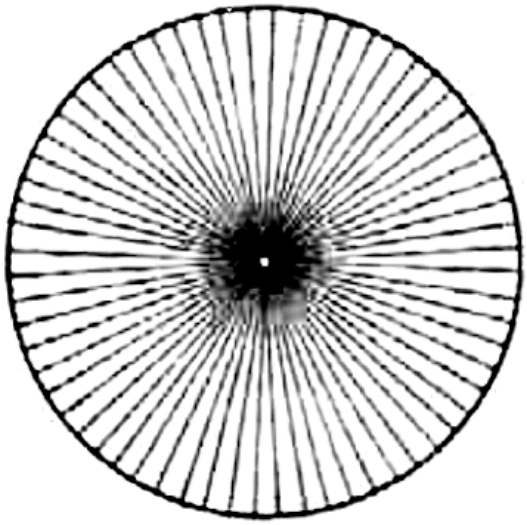

Fig. I.

The line “lies” around a centre; different lines mark different "positions", and concentric lines mark different "layers". The ray “stands,” its point of origin being a point of "rest" or "support". Whether it stands "upward" or "downward" makes only a difference of direction, not of essence — its essence is "standing".

Movement in the line is "progression". Movement in the ray is "ascent" — ascent that is also "expansion": from the centre the rays rise, and at the same time they spread apart.

The line "receives" its being from the ray; it is "passive" — not indolent, but passive in the strict sense: "receptive". The ray "gives",

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it brings the line to birth. It is "active" — not in the sense of being "busy", but active in the strict sense: "essence-giving", "creative", "generative", "formative".

The line is, in essence, "horizontal"; the ray is, in essence, "vertical". Horizontality and verticality are *characterised* not by *direction* but by *essence*: antipodeans call vertical what is opposite in direction to what we call vertical. The horizontal is characteristic of the line: supple, yielding, reclining, advancing, passive line. The vertical is characteristic of the ray: taut, firm, standing, rising and expanding, active ray.

The relationship between line and ray is a relationship between outwardness and inwardness. It is a *formative* relationship: the inner ray externalises itself as line — or, the line is an externalised ray.

No line in quantitative mathematics.

Conventional mathematics remains — at least insofar as it is exact — confined to number and measure. It may indeed recognise different qualities of number and measure, yet all its reflections on and about "qualitative–quantitative relations" are exact only in the sense of *quantity*: its exactness does not extend beyond measurement and calculation. Moreover, its qualitative relation is certainly not a formative relationship — not a relationship between outwardness and inwardness in the strict sense. Thus the exactness of the old mathematics remains

confined to number and measure — it remains within complete thinking *in potential*.[1] That potential it develops to an astonishing degree, yet it never truly advances beyond it. It is like a draughtsman who continually "practises" in order to refine his talent, but is never seized by the "élan" that would make him an artist in the full sense. Old mathematics also applies the potential of complete thinking practically, in mechanics — for mechanics is practically applied mathematics — yet such application is not a true realisation, not a formative act, not an externalisation of inwardness. Mechanics stands to mathematics not as outwardness to inwardness, but merely as a practical application, in which no formative expression can arise. Mechanics is like the use of an extraordinary gift for drawing that never becomes "art", because it remains caught not only in rigid but in hardened intellectuality — one that can never arrive at a supple formation of line.

Old mathematics knows nothing of the formative relationship between line and ray. Even in line and ray it recognises only quantitative relations. Therefore it knows neither line nor ray in their essential sense; it knows no *essential* distinction between them. It knows the line only as an abstract "stroke" — and in the same way it knows the ray only as an abstract "stroke."

Because the old mathematics knows no line in the essential sense, it also does not lead to a true beholding of the "surface" as the outwardness

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1) "Complete thinking in potential" (*volledig denken in aanleg*) - In Schoenmaekers' terminology, "complete thinking" (*volledig denken*) refers to the full human capacity of thought — the unity of its two formative functions: the **absolutising** (linguistic, distinguishing) and the **relativising** (formative, unifying). In *old* mathematics, this completeness exists only "in potential" (*in aanleg*): it develops the capacity of thought to great precision but never realises it as a living, formative unity.

of inward life — for surface, as outwardness, is: *line*. The "spherical" surfaces are the most fundamental pliancy of all surfaces, yet every surface is a variation upon this underlying form of the "sphere". Every expression is, at its core, a hollowing-out. Every surface is, at its core: line, line, line. Because the old mathematics knows no line, it must remain deprived of the vision of born, unspoiled, pure outwardness of nature.

Insofar as mathematicians are "conservative" — *wishing* to remain with a mathematics that is not truly formative — they must inevitably become opponents of every positive view of nature that is truly formative. From the outset, they must reject every positive explanation of nature that unfolds into a genuine and exact beholding of pure surface. They must be enemies of every positively "true" contemplation — true in the sense of our definition of truth.

Our *public*, modern world of thought can be characterised entirely as *conservatively* mathematical. In modern intellectual life, no idea is taken seriously unless it is without formation (“sober”, as they say) and finds exactness only in number and measure. Our public, modern world of thought grants formative expression only to the artist, as a "luxury", and to the naive believer, as "edification" — but it turns against every formative act *within pure thinking*. Modern humanity must first come to feel how profoundly untrue

this attitude is before its need for formative mathematics can awaken.

Our *public*, modern practice is, through and through, the practice of lineless thinking. In mechanics, this entire practice finds its clearest expression — and mechanics governs the whole of public activity. So long as the modern world wills this practice and no other, it must, in practice, turn against the very object of true beholding — and thus against all that is born, unmade, unspoiled, and pure: every natural "surface", every outwardness of nature. It must, by its very nature, become a world that destroys nature — full of instruments of destruction and experiments of vivisection. This does not mean that the machine is unconditionally condemned. Where the machine *serves* formation, it is, of course, good. But *now* it defines society; *now* it is the triumph of *line*-less thought, the glorification of *form*-less thinking. Therefore, it has become a curse upon all that is formative or knows formation. Modern humanity must first come to *feel* how profoundly unnatural the practice of line-less thinking is before its need for formative mathematics can awaken.

The practice of lineless thinking also brings with it the exclusive striving for power for power's sake — for power is nothing other than the direct or indirect dominance of one kind of quantity over another. A line-less, quantitative world excludes the very opposite of power. That opposite

is: justice. Justice is the acknowledgement of formation (or creation) in everyday practical life. Modern humanity must first come to *feel* how glaringly unjust the practice of line-less thinking is before they can develop a need for formative mathematics.

The practice of line-less thinking also fosters an exclusive reverence for the "profession" — since professional knowledge or skill is *a quantity* of knowledge or skill. The modern individual must first come to *feel* how inhumane this is before they can develop a need for formative mathematics. Formative mathematics is not a "profession", but the affirmation of living humanity that exists within every profession and is often supressed by a world that values quantity alone.

Line and ray in relative natural phenomena.

The characteristics of line and ray that we have previously developed are characteristics of absolutes. We can observe these characteristics in relative natural phenomena — particularly in those *fundamental* facts of nature which science has established as its most reliable outcomes for all educated individuals, and which are now referred to as *natural* phenomena because they are no longer the exclusive domain of a particular scholarly discipline.

The force that radiates from the centre of the sun is a *radiation* of power, which takes shape as a *line* in the elliptical orbit of the Earth. The old mathematics revealed this line as a fact of nature, but it never recognised it as a line — only as an abstract, elliptical trace. The "return" action of that solar radiation is *gravity*, in so far as it "responds" towards the sun's centre. From the centre of the Earth, too, there issues a radiation — the force by which the Earth swells outward — and this radiation also forms a line at the surface of the Earth. The return action of this radiation is again *gravity*, in so far as it reacts towards the Earth's centre.

It is quite straightforward to recognise line and ray in these fundamental facts of nature. The difficulty arises when we begin to consider natural phenomena that are built upon these foundations. Beginners in Formative Mathematics often fail to notice this: they imagine they can immediately identify, in every particular thing, what is ray and what is line — and become discouraged when they find that it is not so simple. Yet once we properly understand this difficulty, we are already beginning to think our way beyond it. To grasp it clearly, however, we must return once more to a distinction already mentioned — that between the conceptual illustration and the figure.

Conceptual illustration and figure.

The figure is a crucial tool for testing and sharpening our conceptual illustration. This figure, which helps to test and sharpen a formative conceptual illustration is itself formative — formative in the strict sense: expressive, not representative. The formative figure arises naturally from the inner conceptual illustration, insofar as that inner conception seeks to attain sharp exactness. When we wish to rediscover such a figure within given natural reality, we must therefore treat it as an expression, not as a representation. For it must teach us to perceive the relationship between inwardness and outwardness; it has nothing to do with internal or external parts. Internalities and externalities are represented; outwardnesses are expressed as the outwardnesses of inwardnesses. In other words: if we wish to rediscover a formative figure within natural reality, we must not ask above all whether it "resembles" (for representations resemble!) — but whether its character corresponds to the character of the given natural reality. Of course, so long as we are dealing with fundamental, "foundational" natural phenomena, the figure will also "resemble" — for nature, at its *foundation*, works in regular, geometric order. And that is why we could so easily find our figure, which

represents the relationship between line and ray—in the fundamental natural relationships between sun and earth. But as soon as we enter the superstructure of nature, things are no longer simply regular and geometric; and then we can no longer say that the figures resemble or do not resemble—for "resemblance" is no longer the issue. Instead, we must ask whether we can recognise the character of the figure in the character of the natural phenomenon. The *character* of a formative figure is worked out not in a *drawing*, but in *words*—words that arise spontaneously from the figure itself and are guided by it. Thus, for example, we characterised line and ray not merely in words of our own invention, but in words prompted and verified by the formative figure itself—and for that reason, *those words are as exact as the figure*.

As an example of two broad, "superstructural" natural phenomena are: *reproduction* and *evolution*. We all—scientists and laypeople alike—have at least a *general* understanding of reproduction and evolution. Biological science has described the factual material of reproduction and evolution with great "precision"; but in its theories of reproduction and evolution, it has not yet brought that understanding to the realisation of an *absolute* concept. Nor can it do so as long as it remains non-*formative* in its knowledge.

Reproduction and evolution certainly do not resemble

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our figure that expresses line and ray. Yet reproduction may quite rightly be characterised as linear movement in relation to evolution as radial movement. In this way we come to recognise the formative relationship between reproduction and evolution — and we learn to see reproduction as the outwardness of inward evolution.

Reproduction is the characteristically rediscovered line: it is essentially progression.

Evolution is the characteristically rediscovered ray: ascent, expansion.

Once we have grasped the principled correctness of this characterisation, we may develop it further — completely parallel to the characterisation of line and ray already given:

Reproduction is "supple": pliant femininity is its essence, yielding adaptation its living continuation.
Evolution is "taut": it raises species upward from the unyielding impulse of origin.

Reproduction is "soft": it realises itself out of emotional longing and into emotional attachment. Evolution is "hard", "intense": it appears suddenly in the upward creation of a new species [1)].

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1) *Suddenly.* This corresponds with the view of life held by Hugo de Vries in his mutation theory. That view of *life* is now accepted by almost all biologists, even though many strongly oppose his *biology* as such. Even Lotsy, the fiercest *biological* opponent of De Vries, acknowledges the *sudden* character of evolution. The essence of De Vries's view of life is unconsciously formative; it will one day prove to be formative in truth — but not through biological science alone.

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Reproduction “lies” in calm, even sequences of individuals belonging to self-same species; it lies in "layers" of kinds. Evolution “stands,” steeply supporting one species upon another.

Reproduction is the causal "progression" from individual to individual. Evolution is the upward "expansion" from the origin of life itself — the source that creates causality.

Reproduction "receives". Evolution "fertilises".

Reproduction is horizontal in nature; evolution is vertical in nature. The upright Cross with outstretched horizontal arms is the natural symbol of reproduction and evolution.

Reproduction is the outwardness of evolution. Evolution is the inward life-impulse — the original force that continually externalises itself anew in reproduction. That is why every newly reproduced individual, in its embryonic stage, recapitulates all the forms that preceded it: Life begins, in each individual, as something newly original.

Two kinds of exact expression.

When we speak of the absolute, we speak in an essentially different way from when we speak of the relative. Yet we can speak exactly in both cases — both in speaking of the absolute and in speaking of the relative. Both forms of expression are

different in nature — yet each can be exact, in its own way.

The absolute is the enduring. Therefore, the movement from the relative to the absolute is a movement toward what endures. And when this enduring is then "expressed", our language itself must bear the character of endurance. The expression of the enduring has the style of stability: it is *assertive*. It is certain of its right to be assertive, and therefore allows, within its very style, the possibility of rational control; and through that same style it reveals itself as the control of the human impulse to think, guided by the formative figure. The certainty that this control brings to the expression of the absolute is itself enduring: it is a "calm" certainty — a "ground" of assurance. When the expression of the absolute is falsely imitated, it becomes "oracular". Oracular speech wants to sound assertive but is not — and therefore excludes, in its very phrasing, all possibility of control. When we spoke of the absoluteness of line and ray, we spoke assertively — not oracularly. Our impulse to think, tested by the exact formative figure, must judge whether this is truly the case.

The relative, by contrast, is the gradually changing, the transient, the directly sensory element in the data of nature. When we rediscover the absolute within the relative, we speak of the transient from the standpoint of the enduring. How then must our language be? — Since it speaks from what is enduring,

it too must be assertive — not oracular. But it must not be assertive without qualification. For in speaking from the enduring, it speaks of the transient; therefore its assertive expression must remain attuned to the changing nature in which it rediscovers the absolute. Thus its *foundation* is steadfast certainty, yet it carries within that foundation a changing or growing certainty — a certainty that develops with the *growth* of insight. Its style, then, will be both assertive and sensuously perceptible at once. When that style is falsely imitated, it becomes oracular and inflatedly rhetorical. Our impulse to think also tests this mode of expression through the exact formative figure. Before we can explain that control, however, we must first distinguish between "expression by figure" and "figurative expression".

Expression by figure and figurative expression.

Thinking the absolute is "expression by figure" (*figuurzegging*).

Contemplating the relative speaks in "figurative expression" (*figuurlijke zegging*).

We have already come to know the figural character of the absolute concept. The absolute concept naturally expresses both its conceptual image (*begripvoorstelling*) and its figure. Yet the absolute concept does not lose its figural character even as it enters into the realm of relative natural phenomena. In nature, the pure figure thus becomes visible,

yet it remains sustained and structured by precise formative sub-figures. Thus the pure, exact figure develops into a figure-containing image of nature and into figurative, poetic expression — without losing its exactness. This happens entirely of its own accord. That is why we quite naturally spoke figuratively when we rediscovered the absoluteness of line and ray in the relativities of propagation and evolution. The figurative turns arose with such inevitable, compelling naturalness — for example: “Propagation 'lies' in calm, even sequences of self-similar individuals; it lies in 'layers' of species. Evolution 'stands', steeply supporting one species upon another.”

Control of figurative expression.

The figure exercises a twofold control. On the one hand, it tests the conceptual illustration of the absolute; on the other, it tests the contemplation of the relative. It controls the conceptual illustration of the absolute until it becomes a certain insight into the absolute — a calm and steady foundational insight. For example, when we say that I have gained a clear insight into the absolutely round circular line, this certain insight is then, in a relative sense, "complete" — complete both as certainty and as insight. I then know, at least in principle, everything that can be known about the absolutely round circular line; and I know it with a principled, "finished", and tranquil certainty.

v.3.3

All that I can then further understand or say about the absolutely round circular line is merely an elaboration of the same truth (for the sake of clarity, perhaps), or another way of expressing the same thing — but never a real renewal of insight, never an essential deepening or widening of it.

The figure also controls the contemplation of the relative — just as decisively, yet in quite a different way: it leads not to final certainty but to an ever-growing certainty, to a continually renewed and, in principle, unending insight. For example, when the figure tells me that propagation corresponds to the "line" and evolution to the "ray", it speaks with fundamental and undeniable certainty. But the insight it grants me continues to grow, as ever new relative phenomena of propagation and evolution reveal themselves; and my sure understanding becomes more and more clearly confirmed. Meditation *naturally* tends toward a definite understanding — though, within our human *relativity*, such definiteness always remains *relative*. Contemplation, by contrast, is never complete: it beholds the one figure continually playing through ever new forms — certain through the figure itself, yet endlessly varied in its visible mobility.

Figurative expression in a strict sense.

We have spoken of figurative expressions in the *strict sense* — that is, of expressions *supported and sustained by a definite, exactly con-*

structible figure. Only such expressions are, by their very nature, both assertive and sensuously perceptible at once. This does not apply to metaphorical turns of phrase which, in books on style, are unfortunately also called “figures.” Such metaphors are not figures at all, nor genuine figurative language. Expressions such as “curtain of fire,” “shower of bullets,” or “flaming enthusiasm” are metaphorical, but they have nothing to do — directly or indirectly — with figures in the strict formative sense. The regrettable confusion between "figurative" and "metaphorical" has helped to foster among scientists a deep prejudice against figurative language. In truth, figurative language can be exact: it can be tested by the natural means of control given in our impulse to think — the figure itself. Whoever rejects figurative expression on principle can never relativise in a controlled way. When speaking of relative natural reality, such a person can only specify "precisely"; but they lose all verifiable accuracy as soon as they rediscover the absolute within the relative — that is to say, as soon as they begin to think formatively, in the full human sense. Hence strictly scientific minds are often so awkwardly imprecise when they attempt to use — or to judge — formative language. They have no inkling, therefore, of the inner struggle required to attain precisely

formative language. No “study” can be compared with it, nor any mere “struggle for existence.”

The figurative gesture.

We said: “Contemplation (or relativising beholding) beholds the one figure continually playing through ever new forms: certain through that figure, yet changeable in its own visible mobility.”

The relativising activity of the figure within relative forms of nature is the continuing operation of nature’s geometrical sub-formation. This underlying formation permeates every relative objectivity — even the smallest particulars. We can behold this formative continuation of the figure within relative reality with exactness, and express it with the very same exactness proper to our relativising impulse to think — that is: an exactness that *grows* with *growing* insight. Our relativising thought can never reach a closed or final insight, for what is "closed" excludes all growth, and growth belongs to the very essence of relativisation. Whoever says that “growing exactness” is not exactness should remember that this relativising-formative exactness is the complementary unity of exact knowledge of the absolute. Exact and complete knowledge of the absolute becomes fully formative — becomes truly *real* — only when it proves itself also in its apparent opposite: in relativising, ever-growing, exact contemplation.

Yes — the underlying figure works its way through all relative things, even into the smallest details.
And a living, formative insight — as it grows — begins to see *increasingly more* of those details as shaped by the figure. It sees them more and more truthfully — "figuratively". And it can "express" those details exactly — but not in words.

Only the formative working of the figure within directly broad natural data can be expressed exactly in words. The formative working of line and ray in propagation and evolution, for example, can be put exactly into words — figurative words. But once formation becomes detailed — becomes personal — it can no longer be expressed exactly in words. We express it instead through "gesture-language".

There is such a thing as "exact" gesture-language. When we see how a figure works through the small details of life, we can express this exactly — but only through gesture. And that gesture will itself be . . . . figurative, because it expresses the working of the figure.

In the delicate realms of human intimacy, only gesture is an "exact" expression. Any infallible understanding of gesture is immediately destroyed as soon as we try to put it into words.

Who does not know this?

Yet few people realise that beneath every exact gesture lies the *figure*. Exact gesture is figurative, and can therefore be stylised — broadened *again* — into a gesture where the formative figure

stands so clearly revealed that the gesture itself can be characterised wholly by a single figure.

The figure of the cross is one such stylised gesture. That is why it consecrated the intimate relations of the Egyptian mystery-brotherhoods and of the first Christian communities.

All true formative art is exact gesture striving towards figure-formation. The formative artist knows "exactly" how the fundamental figure works its way into the finer details of the life he contemplates.

He cannot express those details in words, because no particularity of life can be expressed in words. Whoever tries to put the particularities of life in words merely reduces them to dead externals and internals.

Biological science suffers from this verbal reduction. Through it, biology reveals that it cannot "contemplate" formative life — it merely "looks" at it.

Why then do so many modern artists begin to speak and write about their work? Because a new insight into relative objectivity is powerfully growing in humanity today. This new insight must first be spoken in words that explain anew the broad phenomena of nature. Only then will our culture begin to contemplate its relativisation in the finer details of life. And only then will a new

formative art give it expression in gesture ... without words.

As long as language has not yet clearly expressed the new insight in relation to the directly broad phenomena of nature, even formative artists will try to speak in words.

They sense the necessity of this new understanding—it's part of what makes them artists. And so they too attempt to speak in words, because they feel that their art alone is not enough ... not yet.

Intellectual rigidity.

Our Western way of thinking knows nothing of *line*—the visible form of inner order—and it is dominated by scholars who want to remain with a *line*-less science. This is due to the fact that our intellectuality has been "hardened" for centuries and unable to become pliant and pass over into formative reason (*beeldende redelijkheid*). Reason is hard—as hard as marble. However, marble can receive *line*—visible form—from a sculptor. Similarly, despite its resistance, the intellect must be able to be shaped by truly formative thinking; it must be able to become supple, become reason shaped by form. If it cannot, then it is not only hard, but hardened, or *stiff*. Then it *suffers* from stiffness; then it is *sick*.

In contrast, Eastern thought does not suffer from this debilitating stiffness. Eastern thought embraces "line" and is inherently supple through and

through. That's why an Oriental *kris* (a type of dagger) appears so gracefully beautiful, while a Western *sabre* seems so clumsy and unattractive.

This certainly does not mean that we should transplant Eastern ideas into the West, as the Theosophists are accustomed to doing. Eastern thoughts are formative — but delicate. They blossomed in people who believe easily; they have not passed through the fire of rigorous doubt. As soon as these delicate Eastern thoughts are brought over unchanged to the West, they get crushed to death. Ideas such as "Karma" and "Reincarnation", for example, have already lost here the flexible formative power that is their original Eastern truth.

No — our Western world of thought can only become flexible in its own way: positively, exactly, in a controllable way — not through the tender, poetic gentleness of the East. But once the Western mind begins to receive *line*, its line will show a stronger structure than that of the East. Once the Western way of thinking is healed of its terrible rigidity, it will be both more flexible and more assured than the Eastern, precisely because it has known strengthening doubt.

A glorious hope for our West! We must not shrink from any remedy that might help cure the stiffening of our understanding — not even a world war.

Relation of counterparts.

The relationship between *line* and *ray* is a relationship of "counterparts". From the figure that expresses line and ray, we can characterise what a relationship of counterparts is.

The line is the counterpart of the ray: it is "receiving", "passive" in relation to the ray — it is born out of radiation. The ray is the counterpart of the line: it is "giving", "active" in relation to the line — it brings the line into being.

Counterparts are related to one another as essential activity and essential passivity.

A real and universally recognised realisation of counterparts is found in human sexuality. The masculine is the counterpart of the feminine, and vice versa. The masculine "gives", it "fertilises"; the feminine "receives", it "is fertilised". In the masculine and feminine we find, albeit by approximation, an absolute relationship of counterparts.

Counterparts are distinct parts of one and the same reality. They only truly exist *in relation* to one another. The *line* is only truly line in relation to the *ray*. And the *ray* is only truly ray in relation to the *line*. In the same way, woman is only truly woman in relation to man; and man only truly man in relation to woman.

Counter-relation

Every counterpart has its other counterpart. And the *relationship* of counterparts itself also has its counterpart: namely the *counter*-relation. The counter-relation is a relation of altered or "reacting" counterparts. In terms of our figure: the ray generates the line, and the line is generated by the ray — this is the relationship of line and ray. But the line also reacts against the ray; there is resistance and counter-effect in it against the ray — in other words, there is also a counter-relation between line and ray. We have already recognised this counter-relation in the reaction of the Earth's orbital line against the radiation from the centre of the Sun, and in the reaction of the Earth's surface against the radiation from the Earth's centre.

While relation proceeds from the active, counter-relation proceeds from the passive. In the relation, the ray creates the line; in the counter-relation, the line resists its radiation. Thus the radiation is "resisted" by the line. For example, the radiant force that issues from the sun's centre is resisted by the earth's orbital line and thereby becomes gravity; likewise, the radiant force issuing from the earth's centre is resisted by the earth's surface and thereby becomes gravity. All that creates is resisted by its own creation — essentially resisted, worked against, and worn away. Nietzsche saw this very clearly

when he said that every creative act inevitably turns against its own creator. And because this is so profoundly true, here Nietzsche and the faith of Christ meet one another. The Christian faith gives dramatic expression to the fact that the creative act turns against its creator. "God dies of His own world" — this lives in the formative essence of the Christian faith.

But the counter-relation too has its own counterpart: the *new* relation. Creative reality is indeed destroyed by its own creation — yet it is destroyed only to be reborn as new, creative reality.[1] In this way, gravity co-creates all bodily formation. Christ rises, and the creative human being must die … to become the Royal Human (*Koningsmensch*).[2]

The counter-relation is therefore not "hostility," but formative receptivity. In essence, it is nothing other than the necessary resistance within the material of creation. Without sufficient resistance in the material, the formative power cannot form. A sculptor cannot shape an image in water.

Contraries.

Contraries do not stand to one another as essential activity and passivity, but as affirmation and negation. Examples: light and darkness, high and low, warm and cold.

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1) Schoenmaekers' phrase "*vernietigd tot nieuwe, herboren scheppende werkelijkheid*" expresses his doctrine of **formative negation** — creation renewing itself through self-overcoming. Every act of formation meets resistance from its own creation; this resistance dissolves the old form so that a new, reborn reality may arise. In this sense, destruction is itself a formative act — the path from creation to re-creation, nature to spirit, man to the Royal Human.

2) Schoenmaekers reuses the term "*Koningsmensch*" ("King-Man" or "**Royal Human**"), first introduced in *Christosophie* (1911) as a deliberate substitute for Nietzsche's *Übermensch*. Whereas Nietzsche's figure transcends humanity through self-creation and the will to power, Schoenmaekers redefines it within a Christian-cosmological frame: the *Koningsmensch* is spiritually sovereign, not by domination, but by inner participation in divine formative law—ruling in harmony with the Absolute rather than conquering through power.

Contraries are not "paired" parts of a single reality, but rather *distinct* parts; contraries are merely *degrees* of one and the same reality. Strictly speaking, they are not “opposites” at all — we call them opposites only because we take some "normal" range as the standard, and see this normal range as a dividing line between relatively more and relatively less. For example, we call something "warm" if it is warmer than a normal temperature, and "cold" if it is less warm than that normal temperature. Similarly, we call something "high" if it is higher than a normal height, and "low" if it is lower than that normal height. We call something "light" when it is brighter than a normal brightness, and "dark" when it is less than normal brightness. In contraries, there is *no difference other than* the relative difference of *more and less*. Even diametrically opposed "directions", such as left versus right, are simply variations of more and less. For instance, a left direction is essentially just a negative, a "less" of a right direction. Because in contraries there is no real difference other than this relative difference of more and less, they cannot be reduced to true absoluteness. For if we abstract from contraries the relative distinction of more and less, then nothing at all remains — we reduce them to nothing. There are no contraries

in the realm of the absolute. Absolute light is not light at all — just as absolute darkness is not darkness. Absolute height is not height, just as absolute depth is not depth. Absolute heat is not heat, nor is absolute coldness truly cold.

Even in the realm of relative natural reality, contraries do not possess real existence of their own. Firstly, they are not independent substances; they are only qualities added to bodies. Secondly, when these qualities are brought together, they do not bring one another into being — they neutralise one another. For example: dark colours neutralise light colours; low cancels high; cold cancels heat.

Contraries do not stand in real *relationship*, because a "pair" of contraries is not truly a "pair" at all; they are simply two degrees of one and the same undivided reality. They are formative, not a contraries, but as counterparts, as *one side* of a true polarity; as one counterpart standing in relation to a another counterpart. [1)] For example: high and low together form the one phenomenon of the "vertical" — and this, as a whole, is the counterpart of the "horizontal". Hot and cold together make up the elastic phenomenon in bodies that we call "temperature", visible in their *supple* expansion and contraction. The counterpart to temperature is "gravity" — the *rigid* phenomenon, visible in the strict "fall" of bodies. Light and darkness together form a single, fundamentally *rigid* phenomenon in bodies,

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1) To clarify: only counterparts (*tegenden*) are truly polar opposites — for example, horizontal and vertical. Each counterpart may contain its own contraries (*tegenovergesteldheden*) — for instance, the horizontal has *left* and *right*, and the vertical has *rising* and *sinking*. Contraries have no real meaning apart from the counterpart to which they belong. Contraries are not formative in themselves, but only as expressions of their underlying counterpart.

observable as strict “light”-radiation. And the counterpart of “light” is "sound" — the fundamentally *flexible* phenomenon in bodies, perceptible in the easily bending, elastic propagation of air. Of course, all such counterparts *also* include "more and less" differences of their own, but the *nature* of a counterpart relation is something *fundamentally* different.

All of this is simple truth for formative reason. But when the intellect suffers from rigidity, it can no longer understand counterpart relations. As soon as the rigidified intellect speaks about opposites, it confuses formative counterparts with formless contraries. Indeed, it is often the “cleverest” minds that suffer most from this stiffness of understanding. Philosophically trained ‘experts’, for example, can solemnly insist that light and darkness are counterparts — and that they pair to form shadow. They will confidently claim that “being” and “non-being” are the most fundamental counterparts, and that “being” and “non-being” pair up to “become"!

Rigid intellect versus formative reason.

Reason is twofold: feminine and masculine.

Reason is feminine in relation to the original impulse to think, from which it receives all formative creation.

And it is masculine in relation to receptive humanity — that humanity to whom it pours itself out, fertilising, speaking its formative thought.

This receptive humanity is understanding — still able to receive, rescued from the general rigidity: still healthy, still full of formative resistance, the counterworking opposite in a creative counter-relation.

But the rigid intellect also hears — yet does not listen. It does not "resist" formative reason with life against life, word against word, deed against deed. Rather, it is sick — enviously embittered against the receiving-and-giving life of reason, just as rigid propriety is embittered against young love.

People of "rigid" intellect do not openly argue with the solitary thinker who sends out thoughts from the fullness of his own life.

Instead, they agree among themselves with little gestures:

"Let us silence him — then no one will receive his words."

"And if that fails, let us mock him, then no one will dare receive his words."

They are worldly-wise and comfortably settled. Their diplomas are in order, their respectable names securely established, their honour backed by reputation. Everything they possess, they love to have securely settled for good.

But the solitary thinker possesses nothing "for good" — and wishes to possess nothing "for good."

He lives nothing but … relation.

He can give and receive only in relationship.
So he has nothing to give to the rigid intellect, and nothing to receive from it, for the rigid intellect always insists: once and for all — or not at all! (*voor goéd of niét*) [1)]

And yet, the solitary person still gives. Because what he gives is real human life — and real human life will receive it.

Exercise.

Here's an example of how counterparts are often wrongly confused with simple opposites. The author's name doesn't matter — I'm copying his sentence purely as an exercise:

"The infinite urge (in the human being) is realised by first finding its *opposite*, and then overcoming that opposite within itself. Is not mature wisdom won through conquering the foolishness of youth? And is inner freedom not attained only after experiencing oppression and powerlessness — so that all the beauty and truth of our spirit come into being through mastery over ugliness and falsehood?"

(The italics on "opposite" are the author's, not mine.)

That whole pasage is mere rhetoric — disconnected from real life — because it suffocates every genuine relationship of counterparts [2)] and turns it into a relationship of mere contraries. So many true counterparts are killed off

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1) Schoenmaekers' phrase "*voor goéd of niét*" expresses the rigid intellect's demand for absolute finality — a fixed, unchangeable truth. The *verstijfd verstand* ("rigid intellect") cannot abide the formative, relational movement of thought; it insists that something must be once and for all settled, or else rejected entirely. In contrast, formative reason (*beeldende rede*) lives in the tension of becoming — in relationship (*verhouding*) rather than fixity.

2) The anonymous author uses *tegendeel* in its usual sense of "opposite." Schoenmaekers uses the same word to mean "counterpart": a polar, formative opposite within a single whole..

here! All that remains are simple contraries:

Wisdom — foolishness
Freedom — oppression and powerlessness
Beauty — ugliness
Truth — falsehood.

Wisdom and *foolishness* are contraries. Foolishness is the negation of wisdom. It is not fertilised by wisdom — at best, it can be neutralised by it. So what is fertilised by wisdom? *Knowledge of facts*. Factual knowledge is not yet wisdom, but wisdom works through it — gives it form — until it becomes real wisdom: insight and through-sight into living reality. *Wisdom* and *factual knowledge* are counterparts.

Freedom and *oppression* are contraries. Oppression is the negation of freedom. It is not fertilised by freedom — at best, it is neutralised. So what is fertilised by freedom? *Duty*. Duty is not yet freedom, but freedom works through duty — shapes it — into real freedom: a broad cosmic "must" that is one with personal willing. *Freedom* and *duty* are counterparts.

Beauty and *ugliness* are contraries. Ugliness is the "negation" of beauty. It is not made fruitful by beauty — at best, merely neutralised. So what is made fruitful by beauty? The practically necessary. What is *practically necessary* is not yet beauty, but beauty works through it

and transforms it into *real* beauty: grace within the necessary. This is the principle of all applied or decorative art: what is practically necessary must remain practical, but through direct beauty, it is shaped into graceful necessity. *Beauty* and the *practically necessary* are counterparts.

Truth and *falsehood* are contraries. Falsehood is the negation of truth. It is not fertilised by truth — at best, neutralised. So what is fertilised by truth? *Natural illusion*. Natural illusion is not yet truth, but truth forms it into real truth: "living truth"— knowing and feeling as one. This is the principle of all *living truth*. Scholastic learning needs no illusion; *living truth* does. *Living truth* rejects all deliberate, artificial, and unhealthy illusion — yet it still needs natural, naïve illusion to clarify itself and so become *living* truth. *Truth* and *natural illusion* are counterparts.

Let us now continue the exercise a little further and "correct" the passage. What should the author have said, had he not confused counterparts (*tegenden*) with contraries (*tegenovergesteldheden*)?

This:

The infinite urge (in the human being) is realised by first finding its counterpart, and then uniting with that counterpart in a life-giving way. Is not mature wisdom the fertilisation

of the factual knowledge we acquired in youth? And does inner freedom only become true freedom when it inwardly shapes duty — so that all the beauty and truth of our spirit live in both beautiful and practical deeds, in warmly-lived and clarified illusions?

The passage is still quite awkward — far from “good”. You can’t turn a rhetorical passage into a good one simply by “correcting” it. But at least the mistakes are gone now, and it speaks from *real* experience. It was only an exercise.

Movement.

There are different types of movement: movement in the strict sense and movement in the non-strict sense. Movement in the non-strict sense is merely "displacement" or the act of going from one place to another. In this type of movement, direction and speed are the only measurable aspects—quantitatively determinable direction and speed. Movement in the strict sense, however, involves going away, fundamentally changing, or being elevated to something fundamentally different.

Counterparts are movements in the strict sense: the ray "becomes a line," or "transforms into a line," or "passes over into the line," and the line, in response to the ray, "arises" or "passes over" into the essential unity of ray and line, e.g., in the plane of a circle.

Beyond these counterparts, there is no movement in the strict sense. "Vibrations," for example, are

movements *only* in the non-strict sense. They represent mere contraries — a to-and-fro of opposite states — but not counterparts, and are therefore not "formative".

Movement in the strict sense is life. And it can live without restless activity, without busy to-and-fro motion and can be locally quite "still." Vibrations, whether coarse or fine, do not explain life. But the locally still transformation from one counterpart into another is perceptible as life itself. The "silence" spoken of by ancient mystics is nothing other than movement in the strict sense, *life in the strict sense*.

Notes:

1. The conceptual illustration is sensual (*zinnelijk*), and not simply *sensory* (*zintuiglijk*). [1)] It begins from a particular sensory perception, becomes a unified sensual representation in which all separate sense-perceptions are resolved, and then — after the act of absolutising — returns again to the particular sensory perception. The second act of thought formatively re-enacts the sensory perception from which the first act had arisen. The exact formative figure marks the beginning of this exact return to sensory perception in the second act of thought. The formative figure is a sensory externalisation both for the eye and ear: it is something to "see", but only together with the explanation given by the word, which is perceived — directly or indirectly — through hearing.

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1) Schoenmaekers consistently distinguishes between *zinnelijk* and *zintuiglijk,* terms often flattened in translation. *Zintuiglijk* (“sensory”) refers to the outward, physical operation of the senses — the data received by sight, hearing, touch, and so forth. *Zinnelijk* (“sensual”) refers to the inward life of the senses — the unified, formative experience in which perception becomes inwardly alive. Whereas the sensory relates to the separate sense-organs, the sensual expresses the inner synthesis of these perceptions within consciousness. In Schoenmaekers’ Formative Mathematics, the *zinnelijk* is therefore not sensual in a bodily or erotic sense, but as the inner animation of the senses — the living mediation between sense and form.

2. The return to the sensorially given world completes the life of thought. Hence only after this "relativising" can we know exactly from which sensory data our thinking originally set out. Meanwhile, particular sensory impressions must first be softened into "general" concepts before they can become "absolute" concepts, as we saw in the first chapter. Thus, we blur and “forget” the sensory sharpness of the sense impression in forming the "general" concept; that sharpness then returns sensually in the conceptual illustration of the "absolute" concept, and only returns sensorially in the relativising act of thought.

3. Relativising "beholding" formatively re-enacts sensory perception — not only "sight", but all sense-perception. There is "auditory" beholding and "tactile" beholding just as there is "visual" beholding. Beholding is the one unified sensuality, insofar as it returns to the sense-perception of whichever organ it arises from, and formatively re-enacts that perception with sensual unity.

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III.

ABSOLUTENESS OF THE FIRST ORDER.

v.3.3

A perfect circle line is not a first order absoluteness.

A perfect circle is indeed an absoluteness — it possesses everything that characterises "line," and that not by degree but in its entirety. A perfect circle is absolute *as a line*. Yet it is not absolute without limitation; it is not absolute as an *infinite* line, and thus not *a first-order* absoluteness — not the absolute line.

For although a perfect circle excludes every more or less in respect of its linear character, it still involves more or less in respect of its distance from the centre. As a line it is absolute, but the distance to its centre remains relative, so long as it continues to be a circular line.

If, starting from the circle, we imagine the centre ever farther away, the circle becomes ever straighter, though it still remains a circle — only one with an ever greater radius.

Only when the radius becomes infinitely great — that is, when the centre is conceived at infinite distance, or rather, when the centre is thought away altogether — does the line become absolutely straight. Then, and only then, is it an absoluteness without any limitation: an absoluteness *of the first order*.

The absolutely straight line is "the" absolute line.

Why?

Because it alone, *as line*, is an absoluteness of the first order. Its ray too — the absolutely infinite ray — is a first-order absoluteness. The absolutely infinite ray is likewise "the" absolute ray, for it alone, as ray, is an absoluteness of the first order.

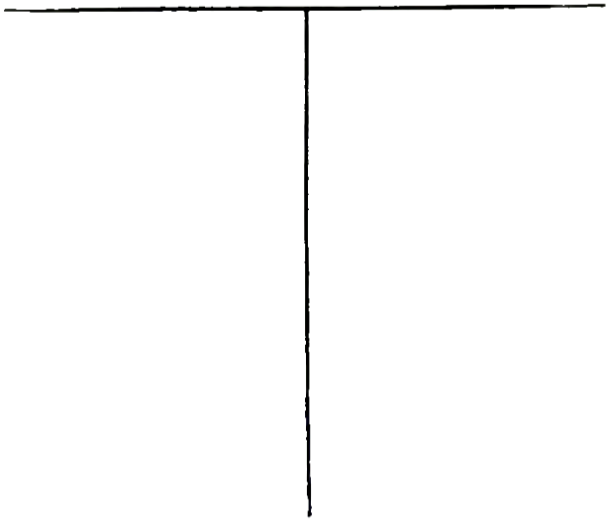

Fig. II.

The cross-figure.

The figure that gives objective form to the conceptual illustration of the pair of first-order absolutes is the figure of absolute perpendicularity — the cross-figure. It is the figure that represents ray and line reduced to first-order absoluteness. It characterises the relation between these first-order absolutes as an absolutely rectangular relation — a "cross"relation.

v.3.3

This figure is, in essence, "open". We can extend its lines endlessly in all directions without altering its essential character; and however far we extend those lines, the figure never gains an "outline", never becomes "closed". It is wholly and essentially "unbounded" — and in fact truly unbounded — for it excludes every form of limitation. Because this figure arises quite naturally from our conceptual illustration, it characterises the conceptual illustration of the absolute counterparts of the first order as an illustration of what is essentially "open" — essentially and actually "unbounded".

"The" absolute line characterizes absolute Time.

Does the absolutely straight line characterise an actual absoluteness of the first order? Again, I do not ask whether there exists a reality that "resembles" the absolutely straight line, but whether there exists a reality that is characterised by[1)] it.

The answer to that question depends on our trust in the human power of thought. If we do not trust that formative impulse of thinking, our answer will at least be hesitant. But if we do trust it, and continue to trust it unwaveringly, then we must believe in its *reality* — that is to say, we must believe that its

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1) To say that a reality is "characterised by" a figure means: that this figure expresses the formative law governing that reality — that the same absolute principle which gives the figure its form also determines the structure or nature of that reality. A **resemblance** (*gelijkenis*) would be merely visual or superficial, but a **characterisation** (*karakterizeering*) means that the formative principle embodied in the figure also operates in that aspect of reality.

conceptual illustrations express reality, and that the figures of those illustrations characterise — that is, formatively express — actual reality.

The reality characterised by the absolutely straight line is absolute Time.

For the absolutely straight line “tells” us:

Progress without beginning and without end.

Progress not bounded but, on the contrary, transcending every boundary.

Progress without direction and without speed.

Progress that is purely and absolutely progress — not the progress of something, but progress itself.

Progress that may be called progress only in the essential sense: as the counterpart of extension — not progress in the incidental sense of movement or velocity.

And all this means: time — *absolute Time*.

Absolute Time is real — or else our power of thought itself cannot be trusted. Absolute Time is real, formatively real: it is not a “thing” or “substance,” but movement *in the strict sense*. It is real only in relation, and indeed in relation to its counterpart: absolute Space.

"The" absolute ray characterises absolute Space.

Why? Because the absolutely infinite ray tells us:

Expansion without point of origin and without end.

Expansion that is not bounded but, on the contrary, opens all boundaries.

Expansion without emanation from a definite centre, and therefore without increase and without division.

Expansion that is purely and absolutely expansion — not the expansion of something, but expansion itself.

Expansion that may be called expansion only in the essential sense — as the counterpart of progression — but not expansion in the incidental sense of enlargement or separation.

And all this means: space — *absolute Space*. Absolute Space is real — or else our power of thought itself cannot be trusted. Absolute Space is real, formatively real: it is not a “thing” or “substance,” but movement in the *strict sense*. It is real only in *relation*, and indeed in relation to its counterpart: absolute Time.

Absolute Time and absolute Space as Universal counterparts.

A "Cosmos" (literally "Order") refers to the defined absolute of a solar system or a collection of defined absolutes of solar systems. This is different from the "Universe." The "Universe" represents a unified whole that incorporates all specific cosmic absolutes (excluding absolute first-order)

into a living and dynamic unity, rather than merely an "orderly whole."

Absolute Time and Absolute Space are counterparts within the *Universe*. Absolute Time (the line) is the Universe's pure outwardness; Absolute Space (the ray) its pure inwardness..

Can we contemplate Absolute Time, as outwardness, as one with its inward "counterpart", Absolute Space? Yes — absolute Time can indeed be seen again within relative reality. Our cross-figure will show where. The figure that gives visible form to our conceptual illustration of absolute Time and absolute Space expresses absolute openness — that is, absolute and living boundlessness. We perceive this absolute openness, rediscovered within the relative, in the surfaces of living beings — whenever we truly see those surfaces "open," that is, give up their fixed limits in a steady transition from one form to another. The "character" of absolute openness can likewise be seen in the relative boundlessness of every living form of nature — each one showing its boundlessness by constantly exceeding its own limits, by growing, outgrowing, and dying. Thus we recognise the utterly open outwardness of Time in the very transience of all that lives and

perishes. In transience itself, we see the pure course of Time break through — and, one with that course of Time, Space. Through transience we glimpse the Life of the Universe itself breaking through. Living and dying forms arise and pass away as revelations of that universal Life — as revelations of the relationship between absolute Time and absolute Space. We see transience most clearly in dying. That is why humanity instinctively feels death to be sacred: it is experienced as a revelation of the Universe — and all the more purely the more triumphantly one passes through the anguish of death. And since dying, as a revelation of the Universe, inherently bears the form of the cross-figure (whether clear or dim, yet always there) it is only natural that humanity should see the archetype of dying as dying "on the Cross".

We shall soon see that we can name absolute Time and absolute Space in another way than “Time” and “Space.” When we speak of “Time” and “Space,” we are, consciously or not, emphasising their constructive character — and thus the figure they necessarily generate. As absolutely open counterparts, Time and Space form the construction of the Universe itself: opening every bounded thing so that it may come to new form. The unity of absolute Time and absolute Space is "point": absolute Time-point and absolute Space-point in one — the "absolute point", absolute of the first order.

That point is wherever absolute Space is, and whenever absolute Time is. In other words, that point is absolutely everywhere and absolutely always — it is "omnipresent"; it is "place" — *absolute* place. Wherever and whenever Space and Time come to limitation or definition, place too becomes defined. A definite point in time is a definite "fact", and every definite fact is at once a definite place. A fact “has place.” Whoever cannot see the essential "character", the essential "meaning" of a fact, remains confined to mere external knowledge of facts and has no "insight". But whoever can penetrate to the essential character and meaning of a fact, sees the fact also *constructively* — and thus has insight. The writer of our Gospels had such insight into the dying of Jesus Christ. That is why he saw him die "on the Cross". That insight is constructively true, even if historians were to prove a hundred times that Jesus Christ was not crucified but stoned. Such insight is, in essence, the same as that of the ancient Egyptians, who knew the cross-symbol as a cosmic Cross — a formative figure of a cosmic transparency, penetrating to the universal counterparts that pervade all cosmic formations.

Now see how language and sense of form live "for" each other. Without a sense of language, no insight into the universal counterparts would be possible. I have already said (p. 12) that the sense of form alone cannot penetrate to the fundamental cosmic movements.

It would be infinitely more impossible for the sense of form alone to penetrate to the universal counterparts. Yet the sense of language alone could not do so either. The sense of language by itself reveals to us no *construction*; and true insight — *formative* insight — is always, directly or indirectly, constructive.

Force and substance.

Absolute Space is the absolute activity within the Universe — the one universal Force itself. Absolute Space is identical with "the" Force. We call absolute Space "Force" when we place the emphasis upon its active, moving essence. And correspondingly, we then call absolute Time: "Substance". Absolute Substance is absolute passivity — absolute *being-moved*; it is "the" receiving movement itself.

Here we use the born word "*stof*" (substance), proceeding from living, everyday language. In living usage, the word *stof* means "that which is worked upon," or "that which undergoes the action of force." If we trace this born meaning back to its absoluteness — without "adding" or fabricating any foreign technical sense — then absolute Substance (or the absolute *essence* of Substance) proves to be identical with absolute outwardness, or absolute *being-moved*, or absolute Time.

When we think formatively-mathematically — that is, when we think in formative relationships — we certainly do not come to define the essence of substance as

a “world-ether” or a “world-substance” that could exist in and of itself. Nothing is real "in itself". What is real, is real *in relation*. What is real, is activity in relation to passivity — or passivity in relation to activity — or the unity of both activity and passivity together.

Force is real in relation to Substance, and Substance is real in relation to Force. Force and Substance are one — truly one — and not “identical” or “the same.” They are *counterpartially* one, *formatively* one, *livingly* one. And that unity is being in the fullest sense. Everything that is complete is active–passive; everything that is complete is the absolute or relative reality of force-and-substance: force, insofar as it moves; substance, insofar as it is moved.

Creator and Creation.

Absolute Space, as ray, is by its nature inward; and it comes to outward expression in, and as, line — in, and as, absolute Time. Space “appears” in and as Time. Time is the appearance of Space. All that appears has Time as its ground of appearance. All that appears is founded in the appearance of Time — and its appearing, in Time, passes again into dissolution.

If we now place the emphasis upon the impulse to appear of absolute Space, and upon the receptive character of appearance belonging to absolute Time, then we call absolute Space "the" Creator (or

the absolute "Subject"), and absolute Time "the" Creation (or the absolute "Object").

Subjectivity is, in its essence, "that which wills to appear" — that which inwardly longs to express itself, to pour itself out, to radiate outward. And objectivity is, in its essence, appearance itself — outward expression, effusion, radiation. Subjectivity and objectivity, when thought through to absoluteness, are "the" Subject and "the" Object — "the" Creator and "the" Creation.

The unity of subjectivity and objectivity is *consciousness*. Consciousness is the relationship of subjectivity *and* objectivity. Consciousness is the being of subjectivity toward objectivity. And this relationship, when raised to absoluteness, is Universal Consciousness: the consciousness of the Creator toward the Creation. In the faith of the "Trinity" or "Holy Threefoldness", this insight already shines through clearly — even if it has not yet been brought to exactness. Christ is the Universal Consciousness — the Wisdom, the Logos, the Word. He is conscious "of" the Creator — the one All-Force (Omnipotence), the "Father"; and He is conscious "toward" the Creation — the "emanated", the "Holy Spirit". The "Holy Spirit" is the" emanated" Spirit of the Universe or Universal Force — the objectified All.

Since absolute Space is identical with "the" Force and "the" Creator, and absolute Time is identical with "the" Substance and "the" Creation, the unity of absolute Space and absolute Time is likewise identical with the unity of Universal Force and Universal Substance — identical also with the unity of

"the" Creator and "the" Creation. In other words: Universal Consciousness is identical with absolute Being and with absolute Place. We may express this identity quite simply in the phrase: *Universal Consciousness is Omnipresent*. The absolutely unconscious is nowhere. The absolutely unconscious is not. [1)]

The Subconscious.

The preceding explanations already tell us, naturally and precisely, what the "subconscious" is — that reality whose intense actuality modern psychologists are at least fortunate enough to acknowledge.

The subconscious is nothing other than Universal Consciousness in so far as it works itself out within a particular human reality. The subconscious is, in its essence, spontaneous — it is the "élan" of consciousness — and as such, a relative manifestation of the absolutely self-living Universal Consciousness. The subconscious may be deliberate or non-deliberate, but never "intentional". For that reason it is fulfilled consciousness — something the "superconscious" is not. The superconscious is characterised by the intentionality that permeates it; and precisely for that reason it is not complete consciousness. For all intentionality strives toward an *external* goal, and therefore everything penetrated by intentionality is not complete in itself — in its own inwardness and outwardness.

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1) Schoenmaekers' closing sentence — "*Het volstrekt-onbewuste is nergens. Het volstrekt-onbewuste is niét.*" ("The absolutely unconscious is nowhere. The absolutely unconscious is not.") — consciously inverts Descartes' *Cogito, ergo sum* ("I think, therefore I am"). Descartes begins from universal doubt, yet in the very act of doubting he recognises that he is thinking consciously; from this act of conscious thought arises the certainty of his own existence. Schoenmaekers reverses the direction: from the absence of consciousness he infers the absence of being. What in Descartes serves as the epistemological ground of the ego becomes, in Schoenmaekers' inversion, an ontological ground — a passage from *knowing* to *being*. The *Cogito* is thus cosmically reinterpreted: not *I think, therefore I am*, but *Where there is consciousness, there is being; where consciousness is not, there is nothing*.

Ordinarily, people call "conscious" whatever is "intentional". They say they have done something “consciously” when they mean, “I did it deliberately.” This happens because human beings, in their "speech", have not yet attained the subconscious, fulfilled wisdom of their own language: their "sentences" are far less wise than their words. In truth, the intentional superconscious is a form of consciousness that — precisely by its intentionality — has not yet become fully living, self-active consciousness, and therefore cannot yet express self-evident truth. The superconscious may be compared to the "technique" of an artist who has not yet fully mastered his craft. So long as the artist has not "mastered" his technique, he works "intentionally", "with effort", or "superconsciously"; his art is not yet "self-evident", and thus does not yet testify to complete conscious ability. But once he has mastered his technique, his art speaks of itself, and then the artist works "subconsciously" — fully alive in consciousness. And if he is a great artist, he then works thoughtfully–subconsciously. Our consciousness becomes ability, or "art", in so far as it becomes subconscious — and thus becomes fully integrated into the self-living Universal Consciousness.

Formative-mathematical thinking unites the subconscious with the deliberate. It is thinking that is thoughtful yet effortless — *naturally thoughtful and methodical thinking*. Such thinking is the formative-mathematical .... *art* of thought.

The life of the subconscious.

The subconscious stands in opposition to the superconscious. The subconscious becomes increasingly realised in proportion as it neutralises intentionality. *Increasingly* — for the completeness of the subconscious is, of course, always "relatively" complete. The subconscious grows, becomes ever more perfected, in so far as it surrenders itself to the absolutely fulfilled Universal Consciousness.

Yet in its essence it is, and remains, "complete" — in contrast to the intentionality that it must neutralise. Complete, because it is formative insight — twofold insight: the *experience* of the subjective and the *beholding* of the objective.

We experience the subjective — and with all the greater calm, foundational certainty and fundamental insight, the more this experience is absorbed into the one Universal Consciousness.

We behold the objective — and with ever deeper growing certainty and ever broader expanding insight, the more we contemplate the relative outwardnesses in which the Creator reveals Himself.

The subconscious is counterpartially one with the Universal Consciousness. The subconscious is the actuality of the Universal Consciousness. Our

human subconscious needs the Universal Consciousness in order to rise, from calm foundational steadiness, toward the multiplicity of the world. And the Universal Consciousness needs our human subconscious in order to realise its unity within the infinitely wayward realm of the relative. That is why Meister Eckhart could say: “God needs me just as much as I need God.”

Surrender of thought.

When we think intentionality away within ourselves until it becomes subconscious life, we give our thinking freely over to the absolutely unintentional Life of the Universe. This free surrender of our intentionality is an offering — the offering of thought to the Universal Consciousness. Through this surrender the Universal Consciousness "burns through" our thoughts. Through this surrender we think from the Universal Consciousness, that is, from the Creator Himself.

To rigid intellect this must sound like megalomania. Rigid intellect knows only of copying or imitation. “Thinking from the Creator Himself” can mean nothing else, for rigid intellect, than “imitating the Creator.” For formative reason, however, it means: dying in the Creator, and desiring no life other than the life of the Creator. This dying is pure humility in relation to

the one creative Universal Force. And that humility is accompanied by an inviolable sense of one's own original truth and worth over against all who do not wish to die in this way — over against all who will not bring their offering of thought to the Creator. Every true believer is humble in this pure sense. The formative-mathematical human being is humble not only in this pure sense, but in an entirely positive and methodical sense. Formative Mathematics is true and methodical thinking from the Creator. Formative Mathematics is: to experience thoughtfully within ourselves the impulse-to-appearance of the Creator, in order to behold His Creation thoughtfully.

Note.

Modern physics already generally acknowledges that the concept of Time is essentially connected with the concept of Space. "If one asks someone," says Melchior Palágyi, "what connection exists between Space and Time, the usual answer is that these concepts are independent and entirely separate from one another. It is by no means easy to take a stand against this fundamental misconception.... We have acquired the bad habit of losing sight of the essential connection between Space and Time: we have cut the nerves that bind these two concepts together, and as a result

we have cut the nerves that bind these two concepts together, and as a result our thinking about Time and Space suffers from a kind of ataxia." [1)]

The recognition of an essential connection between Time and Space is what modern physics calls the "principle of relativity." But it will never succeed in thinking through the relation of Time and Space exactly without knowing exactly what a *counterpart* relation — a *formative* relation — is. Once physics attains exact insight into formative relation, it will also come to know the formative relation of Time and Space. And then its "principle of relativity" will receive the name to which it is entitled: principle of *relation*, or, in Dutch, *verhoudingsbeginsel*.

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1) *Die Relativitätstheorie in der modernen Physik*. Lecture delivered at the 85th Meeting of Natural Scientists in Vienna..

IV.

ABSOLUTENESS OF THE SECOND ORDER.

v.3.3

Kosmos as the counterpart of the Universe. [1)]

The unbounded unity of the Universal (*Heelel*) counterparts works itself out into definite "cosmic" unities. A "Kosmos" is the determinate absoluteness of a "solar system," and a solar system is a Kosmos rediscovered in relative natural phenomena. The unbounded unity of the Universal counterparts "determines itself," or "sets its own boundary," into a Kosmos. A Kosmos is a definite or bounded constructive counterpart of the unbounded Universal construction. The essentially unbounded is not "unbounded" in the *negative* sense. Were that the case, "unbounded" and "bounded" would not be counterparts, but opposites. The unbounded, however, is unbounded in the *affirmative* sense of boundary-creating and boundary-dissolving.

The unbounded unity of the Universal counterparts works itself out into a Kosmos. What does "works itself out" mean? Starting from the ground-unity of absolute Time and absolute Space, the Kosmos builds itself up, determination by determination, until it is fully worked out in the organic body. "From determination to determination." Each determination or boundary is bounded in relation to the Universal counterparts, yet positively unbounded in relation to further determinations. The

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1) The terms *Heelal* and *Kosmos* are retained in their technical senses. *Heelal*, translated as Universe, does not correspond to the ordinary physical universe, but to the unbounded formative unity of the absolute counterparts (absolute Time and absolute Space). *Kosmos*—kept here in its Dutch spelling with *K* to preserve its technical meaning—denotes a bounded constructive unity, a determinate absoluteness (*bepaalde volstrektheid*) such as a solar system, formed through the working-out of the Universal unity. This differs from the English word cosmos, which typically means the universe as a whole. Maintaining the spelling *Kosmos* prevents this confusion and preserves the polarity *Kosmos–Heelal* central to Schoenmaekers' system.

Universal construction itself continuously creates ever more definite boundaries. Within these boundaries we can distinguish basic determinations of cosmic formation: fundamental constructive acts of the one Universal construction itself. And because these basic determinations are constructive acts of the one Universal construction itself, each cosmic basic determination must continue to manifest as a distinct cosmic constructive stage, always and everywhere—for the one Universal construction is always and everywhere: Time-itself and Space-itself.

I call these distinct constructive acts the cosmic "initial movements" (*beginbewegingen*). We shall treat them in sequence as:

1°. the circular plane, or absoluteness of the second order.
2°. the elliptic plane, or absoluteness of the third order.
3°. the determinate elliptic line, or absoluteness of the fourth order.
4°. the bodily form, or absoluteness of the fifth order.
5°. reproduction, or absoluteness of the sixth order.
6°. evolution, or absoluteness of the seventh order.

The circular plane.

The "first" cosmic determination, or the "minimum" of cosmic determination, is the absolute

circular plane: the fundamental unity of absolute circular-radiance (*volstrekte cirkelstraling*) and absolute circular-lining (*volstrekte cirkellijning*).

An absolute circular line is a true absoluteness, but an absoluteness of the second order. It is absolute *as a line*, but not as an *infinite* line, for it carries with it one relativity: its distance from the centre. Likewise, an absolute circular radius is a true absoluteness, but again an absoluteness of the second order. It is absolute *as a radius*, but not as an *infinite* radius, for it carries one relativity with it: the distance of its own line from its own centre.

The circular *plane* can be characterised as an infinitely fine fabric of expanding circular radii and expanded or out-stretched circular lines. The unity of circular radii and circular lines is a unity of relation and counter-relation: it is realised through the action of the radii with the corresponding, opposite receptivity of the lines; and through the reaction of the lines with the corresponding, opposite annulling of the radii. This annulling is, in its essence, nothing other than the lifting-up of the multiplicity of radii into the unity of the one radiance. Through the reaction of the line, the infinitely many circular radii are gathered together into a circular plane. In other words: through the line-reaction the infinitely many circular radii "die" in order to be taken up into the unity of the one circular plane. The one circular plane is a "new relation" between radius and line: a re-

rising of the radii that have “died” into a new reality.

The absolute circular plane, as the "minimum" of cosmic determination, is one-sidedly determined or one-sidedly bounded, and indeed by the minimal boundary: the "point"-boundary. The only boundary of the naturally-born absolute circular plane is its centre. Yet from that centre it expands further in an unbounded way. For this reason, the “first” cosmic centre, *as such*, cannot yet lead to fundamental "body"-formation or to the formation of a “sphere.” For to a body there belongs, in essence, a bodily *boundary* or surface. And that boundary is not yet demanded by the first cosmic centre. As the minimum of determination, the first cosmic centre comes only to plane-formation—plane-formation in all directions, or rather, without any *determinate* direction; but it does not come to body-formation. More explicitly stated: The infinitely many planes that proceed from the first cosmic centre are indeed gathered together—oppositely one, formatively one—*as planes*; but from plane to plane they are not gathered together. From plane to plane they are indeed continuous, because there is no “distance” from plane to plane. But the formative unity from plane to plane (the formative unity of the “body”) is not yet present. Why not? Because from plane to plane there is no diversity, let alone a *counterpart*-diversity, and therefore no formative unity of plane to plane

can yet arise. All planes are still circular planes, connected, but *identical* from plane to plane, lacking *opposition* from plane to plane.

The "first" cosmic center is not yet a body center. It is first a center of space (and time). We also call it a *space* center to distinguish it from the *plastic* center, which will be discussed later.

The "first" cosmic initial movement is thus cosmic space and cosmic time combined. It is distinguishable from absolute Space and absolute Time as cosmic entities. Cosmic space and cosmic time are also absolute, but absolute in the second order. When we speak of absolute Space and absolute Time without further qualification, we mean absolute in the first order. Absolute space and absolute time, in the second order of absoluteness, will be referred to simply as "cosmic space." So, "cosmic space" means: the circular radiation from the cosmic center (relatively: the solar center), one with the circular boundary around the cosmic center.

Length and breadth.

The circular plane is a unity of two continuities: radius and line. The radius-continuity “extends” itself from the centre and becomes length because it extends through the lines, one with the lines. The line-continuity yields

around the centre and becomes "breadth", because it yields through the expanding radii, one with the radii. Length, in the strict sense, is the continuity of the radius passing through the lines; breadth, in the strict sense, is the continuity of the line passing through the radii. The absolute, cosmic circular plane of cosmic space is infinitely long from its one boundary, the centre; and infinitely broad around its one boundary, the centre. Accordingly, the relative circular plane must have a relative length and a relative breadth. And therefore the natural quantitative operation (enlargement or diminution) of the relative circular plane must reveal itself as a quantitative operation “in the second power.” If, for example, I double the radius of a relative circular plane, the quantitative value of the plane does not become twice as large, but 2 × 2 times as large. This quantitative operation of the circular plane “in the second power” is inseparably bound up with the nature of the circular plane. Wherever I find a natural quantitative operation “in the second power,” there a natural, relative circular plane reveals itself — a relativity of and within cosmic space.

I say “reveals” and not “characterises.” For the essential, formative characteristic of the circular plane is and remains “an infinitely fine fabric of expanding circular radii and expanded or out-stretched circular lines.” "Measuring" alone never fully characterises the formation

of a reality. But precisely because the circular plane is a reality that has not yet come to body, it cannot, even as a relative plane, be perceived directly by the senses. It can reveal itself only indirectly; it can only "betray" itself through measurement — namely, because it reveals quantitative enlargement (or quantitative diminution) in the second power.

Relative circular plane.

Our cosmic space is full of natural, relative circular planes in which we rediscover the absolute circular plane.

Every emission of light, for example, is a relative spatial operation, and it betrays the relative circular plane through quantitative operation in the second power. Physics teaches us that the intensity of light decreases in proportion to the square of the distance from the light-source. To be sure, light cannot be seen directly as a plane; indeed, we do not see light sensuously at all — our eyes only perceive the objects illuminated by it. But measurement shows that the quantitative operation (increase or decrease) of light takes place in the second power. For this reason, light reveals itself as a relative realisation of the absolute cosmic circular plane, or spatial plane. Light is, as a datum of nature, a spatial phenomenon — and indeed a fundamentally spatial

phenomenon, because the phenomenon-operation (the shining) is so clearly given as a *primary* spatial operation: an emergence from its centre, the light-source. We "ascertain" the line-reaction toward the light-source only through measurement, when we see light "betray" itself as a plane-operation. But that reaction is not given as a phenomenon.

The "free fall" of bodies is likewise a relative realisation of the cosmic spatial plane. When a body "falls freely," the distances it traverses from the starting-point are proportional to the square of the times during which those distances have been covered. If, for example, we represent the times by the numbers 1, 2, 3, 4, 5, then the distances covered in those times must be represented by the ratio-numbers 1, 4, 9, 16, 25. In free fall, then, we measure a quantitative operation in the second power — thus a natural property of relative circular-operation. Is that plane-reality directly perceptible to the senses? No — no more than light is. But measurement shows that the quantitative operation of free fall takes place in the second power. Therefore the free fall "betrays" itself as a relative circular plane. The falling gesture of a freely falling body is counterpart-one with the radius-and-line fabric of cosmic space; free fall is a relative act of the cosmic circular plane, or of cosmic space.

The pendulum movement is also a relative

realization of the cosmic circular plane. The length of the pendulum increases in proportion to the square of the pendulum time. If a pendulum with a 1-second period has a length of 1 meter, it will have a length of 2 × 2 meters at a 2-second period. Again, I cannot visually see a circular plane in the pendulum movement. But the quantitative effect of the pendulum reveals the pendulum movement as a relative reality of the absolute cosmic circular plane. The pendulum movement is also a relative spatial movement in and of cosmic space.

All these second-power effects are data of physics. They are now "natural" data because they are given to every person and are not confined to the private domain of the "field" of physics. Every person is allowed to attempt to explain these second-power effects, even if the field of physics does not find an explanation for them. However, the "field" of physics will not be able to achieve insight into these second-power effects. "Because it is not imaginative and insight is indeed imaginative; insight is constructive. "Well, an imaginative insight tells us that all these relative second-power effects are relations of the first cosmic determination or first beginning movement, which we have come to know as cosmic space, bounded at the cosmic solar center but unbounded outward. Cosmic space is an imaginative reality to the second power.

It is a whole of infinitely many circular planes, unbounded outward, which operate through all things everywhere and always — and which do not essentially depend upon bodily forms, because they are not yet *form*, but *plane*.

Cosmic space as a reality in the second power.

We are thoughtlessly inclined to regard cosmic space as a reality in the third power. We are thoughtlessly inclined to imagine that every relativity of cosmic space must betray three dimensions. This inclination, however, is a fundamental misunderstanding — one that we must correct, and that we certainly will correct, once we give ourselves, thoughtfully and without intention, to our deepest human impulse: the formative impulse of thought.

It is entirely true that we can move in space, spatially, in three qualitatively distinct directions: upward (and downward), to the right (and to the left), forward (and backward). It is also entirely true that we can "measure" in these three qualitatively distinct directions — and that we do so continually. But these three directions are distinct only *as directions*, that is, as movements *in the non-strict sense* (p. 66). These three directions are qualitatively distinct, yes — but not essentially, not formatively distinct. They

are not three essentially distinct “dimensions,” nor three quantitative relativities of movements that would be distinct as movements in the *strict sense*. The essentially distinct dimensions in spatial movement are: 1° the upward-and-downward dimension, or the "vertical" dimension, or "length" in the strict sense; and 2° the "horizontal" dimension, "breadth" in the strict sense, which includes both the movement to the right and to the left, and the movement forward and backward.

It is also entirely true that the “geometrical location” of any given point in cosmic space is determined by three directions. We know the “geometrical location” of a given point in cosmic space when we are able to indicate three directions that meet in that point. But these three directions are again distinct only *as directions*. They are nothing more than three “paths” leading to that point — movements in the non-strict sense. These three location-determining directions mislead us, and cause us to speak of a “three-dimensional” space. Let it now sink deeply into us that “geometrical location” is not yet formation (*beelding*), and that our directional movement in space is likewise not yet formation. Let it sink in that “geometrical location” is not an essential construction. In its essence, cosmic space gives *two* dimensions; it is formative through two essentially distinct, formatively distinct

continuities—length and breadth. In other words, it is a formative plane-reality.

The relative second-power operations, when reduced to absoluteness, are nothing other than cosmic space. Only when we see this clearly do we attain a cosmic insight (*kosmisch doorzicht*) into all those relative second-power operations that physics "ascertains," but can never explain cosmically.

A third continuity arises only when, in addition to the two essentially distinct continuities of plane-operation, the planes are *also gathered together from plane to plane*, and not merely continuous. This third continuity is the body-continuity or plastic continuity. We rediscover it in the dense, enclosed plasticity of bodies. But this third continuity comes to realisation only with the surface, which is essentially distinct from the plane.

Plane and surface.

We cannot yet say precisely how the plane further determines itself to body, and thus to surface. But we can already recognise the essential distinction between plane and surface.

The surface is, self-evidently, the bounding contour of a body. The absolute surface is therefore the absolutely regular bodily boundary — the "sphere"-surface..

The plane, on the other hand, is by its very nature smooth and flat. In the plane, one line is the expansion of another, identical with the other. And in absolute reality this expansion — lying within the strict movement of the ray — is therefore necessarily "smooth". In absolute reality this extension is also "flat". For an absolute circular line is indeed round “en face,” but *straight* “en profil.” [1)]

The surface is the completed outwardness of a body.

The plane, by contrast, is the under-construction of a body; the plane is presupposed by the body as a spatial formative element that has not yet come to full bodily outwardness. For this reason the plane cannot be seen directly “face to face.” We see directly only complete bodily outwardness, that is, surface. The plane betrays itself only, and shows itself only indirectly, through its second-power operation. Light, for example, cannot be seen directly by the senses, but only the surfaces illuminated by it. Light betrays itself only *upon* the illuminated surfaces, which it illuminates "plane-wise" (*vlaksgewijze*). The plane is not a full “appearance” (*verschijning*), but only a "phenomenon" (*verschijnsel*).

The surface, however, "appears". And the more deeply we behold it, the more clearly it appears as a revelation of the one Universal construction.

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1) When Schoenmaekers writes that a *volstrekte cirkellijn is wel rond "en face", maar recht "en profile"* [sic], (absolute circular line is indeed round “en face,” but straight “en profil”) he is distinguishing two perceptual aspects of the same geometric line. *En face* (“from the front”) the circular line presents itself as a perfect round boundary; *en profil* (“in profile”) it reduces to a straight line, since a geometrical circle has no thickness. Schoenmaekers uses this observation to show that even an absolute circular line is not, in its entirety, a completed bodily form, but a flat formative element: round in its appearance-from-above, yet straight in its lateral presentation. This supports his distinction between plane (under-construction) and surface (completed outwardness).

Sphere and Crystal.

The absolute surface is absolutely "spherical". We rediscover it relatively in all the spherical formations of relatively free masses of substance — for example, in water droplets.

When such free masses of substance suddenly lose their flexible freedom, the spherical form will be "fixed". Thus, for instance, suddenly frozen, freely falling water droplets become relatively spherical little forms: hailstones.

But if free masses of substance lose their flexible freedom slowly, the spherical form will slowly recede back to its under-construction: the smooth, flat plane. Of course the body that then arises will still display a surface — otherwise it would no longer be a body. But that surface will be characterised by the working-through of the under-construction, and thus the surface becomes smooth and flat. Slowly frozen little masses of water vapour, for example, will degenerate into smooth, flat, “edged” little bodies: snowflakes.

With this, "crystal-formation" is formatively explained. The angular, edged crystal is a slowly collapsed sphere — collapsed from complete bodily outwardness, or spherical surface, back to the smooth, flat character of its under-construction, the plane. The “absolute” crystal is the absolutely angular,

edged form in which all angles are equal and all edged ribs perfectly strict. The “absolute” or “ideal” crystal is the cube-form. This cube-form is not “the most common” crystal form; in truth, it does not occur in nature at all. But its ideal angularity and edginess we find again — by approximation — in all relative, angular crystal formations.

This explanation is a cosmic insight into the crystal form. A *formative* insight that even the most precise microscopic observation can never give us. It teaches us to recognise the crystal as opposed to complete form, as the “negative” of form. The absolute or “ideal” crystal is, formatively speaking, absolutely no ‘form’ at all, but a “thing” or “object.” The absolute crystal is the absolutely "renounced" form *(”verzaakte” vorm)*. If it could realise itself absolutely in the data of nature, it would destroy all forms there.

Notes:

1. Even the most fundamental realities of a solar system are relative, relative realisations of the absolute or “ideal” cosmic construction. When, for example, in explaining the absolute cosmic construction we speak of the solar centre, we mean the ideal solar centre: the absolute cosmic space-centre, from which the first and ideal cosmic

radiation is emitted — a *radiation* of space. In relative reality the sun is relative space and relative body. Thus, in relative reality, the solar centre is also a relative space-centre and a relative bodily centre. The ideal location of the solar centre is identical with the ideal location of the cosmic space-centre. The ideal location of the cosmic space-centre cannot be "geometrically" determined, any more than any other ideal location. "Ideal location" is not "here" or "there," but a determination in sensory conceptual illustration (*zinnelijke begripvoorstelling*), which externalises itself exactly in a formative figure (*beeldende figuur*). An ideal location becomes relative where a determination of sensory conceptual representation is relatively recovered. In all this, the stiffened, merely precise intellect finds itself in hopeless confusion. Exact reason does not, because it both absolutises and relativises..

2. The absolute cosmic construction is absolute in relation to all of its further realisations. But in relation to the Universe-construction (*Heelalconstructie*) — the absolute *of the first order* — the cosmic construction (although absolute, but not of the first order) is once again relative. Therefore, the transition from Universe (*Heelal*) to Kosmos is *sudden*. Insight into this transition "springs" from our human formative impulse to think. This insight is therefore impossible outside original thinking.

3. Original thinking is not identical with “eccentric” thinking, nor with thinking that ignores the thoughts of others. Original thinking is thinking *from inwardness*. And this can arise in a person after receiving the help of other people’s thinking. We can repeat the thoughts of others in a way that is entirely original within ourselves. If that repetition proceeds more and more from inwardness, then we are not “parroting”. Whoever thinks from inwardness gladly accepts the help of others and gladly acknowledges that help. The parrot, however, conceals where he takes his thoughts from — and does so all the more carefully, the more skilful a parrot he is.

4. The “logic” of formative thinking is *formative* logic (*logische beelding*): a mode of forming that allows no arbitrariness. Formative logic is certainly as “strict” as one-sided intellectual logic — but it is different. One-sided intellectual logic draws conclusions, and in that “drawing of conclusions” it allows no arbitrariness: from the principle, in the direction of the premises, the conclusion “follows.” For example: Every human being is mortal (principle, first premise), Peter is a human being (second premise), therefore Peter is mortal (conclusion). This drawing of conclusions is the extension of one and the *same* thing in a single direction; it can of course be extremely strict, but it takes place outside all formative thinking. Formative thinking, however, is not one *and the same* (één *en hetzelfde*); it is one *and its counterpart* (één *en het tegendeel*). Formative logic does not “draw"

a conclusion, but "works out" the one-and-its-counterpart; and it does so strictly, forbidding all arbitrariness — logically. Whoever calls formative reasoning illogical must point out the arbitrariness in *its formation* — that is, in its unfolding (*uitwerking*) of counterparts. But if he says that formative reasoning makes mistakes in drawing conclusions, he simply misses the point. Formative reasoning does not draw conclusions at all — neither wrongly nor correctly. [1)]

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1) Schoenmaekers contrasts traditional logic with *beeldende logica* (formative logic). Classical logic proceeds by conclusion-drawing: from general premises to a necessary conclusion (e.g., "Every human is mortal; Socrates is human; therefore Socrates is mortal"). For Schoenmaekers, such inference "is the continuation of one and the same thing in a single direction" — extending a single direction of thought without transformation. *Beelding* works differently: it does not draw conclusions but "unfolds" (develops and makes explicit) the unity of counterparts (*één-en-het-tegendeel*). Formative thinking is generative rather than deductive: it manifests relations through constructive insight rather than syllogistic extension. His critique is therefore not of rigor but of one-sidedness — inferential logic lacks the reciprocal, polar structure required for *beeldend* insight.

V.

ABSOLUTENESS OF THE THIRD ORDER.

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From determination to determination.

We have now, thoughtfully and without intention, proceeded step by step from the minimum cosmic determination to the further cosmic determinations. Each subsequent determination is a working-out of the previous one—its counterpart, its polar opposite in the constructive sense. Insight into each new determination arises again from our original thinking, and recognises in every new determination a very intimate connection with the previous one: the connection of a *counterpart-relation*. This we must keep before our eyes at every moment. Rigidified intellect knows no other continuity than persistence: the mechanical continuation of what has mechanically been set as a "thing." Rigidified intellect knows only *causality*. But causality alone is not true continuity: it is merely the continuing identity of one-*and*-*the*-*same*, dead identity, without any relation of counterparts. Formative reason, by contrast, knows true continuity: the continuity of unity in spite of counterpart-distinction.

Which determination, then, will be the immediate counterpart of the "first" cosmic determination—cosmic space?

It will be the plane that is one, in contrast to the infinitely many planes of cosmic space. This polarity between unity and multiplicity is not just a

matter of number; it is a real, *essential* polarity. In other words: The plane that stands as one against the infinitely many planes of cosmic space must be *different*, inwardly and outwardly, from those cosmic planes. And it must differ by the smallest possible amount, because it is also a begin-movement: the second cosmic *begin*-movement, the second formative foundation of the Kosmos. That determinate plane—one not only as a plane in itself, but one also in relation to the infinitely many circle-planes of cosmic space—and that differs only by the minimum modification of the circle-construction—is the "elliptical" plane.

Birth of the elliptical plane.

The fundamental and simultaneously constructive transformation of the cosmic circle-plane must of course take place from its innermost inwardness: the centre. From the centre the circle-plane is essentially constructed, and therefore it is also essentially and constructively transformed from the centre. In other words: the essential-constructive, fundamental modification of the circle-plane is a central modification in the strict and fundamental sense—the birth of another centre from the original one. Thus from the regular plane with one centre there arises the regular plane with two centres, or two "foci"; and this regular plane with

two foci is called in geometry the "elliptical" plane.

In absolute cosmic reality, the elliptical plane is an absolute of the third order. For where the circle-plane has only one relativity, the elliptical plane now has two: the continually changing distance of the lines from the original centre.

Geometry, because it remains with number and measure, does not know the formative relations of the ellipse. But it does not contradict them either, precisely because geometry—as geometry—must remain with number and measure. And formative mathematics does not contradict geometry on questions of number or measure. On the contrary, it gratefully accepts what geometry gives, and keeps strictly to it wherever number and measure are concerned.

It therefore fully belongs to the method of formative mathematics to begin by taking note of the geometrical definitions of the elliptical line and the elliptical ray, insofar as these give us material for formative reflection. We did the same with the circular line and circular radius: the circular line and circular radius were given to us by geometry as material for formative thinking. So let us now take up the material that geometry gives us for the formative contemplation of the ellipse. What, geometrically speaking, is the elliptical line, and what—correspondingly—is the geometrical elliptical ray? [1)]

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1) In the circle, *straal* is a fixed geometric segment from centre to circumference, so "radius" is correct. In the ellipse, *straal* becomes a generative, stretching, directional line of action, no longer a fixed measure. Because it functions dynamically rather than statically, the more accurate translation in this context is "ray."

Elliptical line in geometry.

For geometry, an elliptical line—just like a circular line—is not a line in the strict sense, but only an abstract stroke. The geometrical definition of the elliptical line is therefore nothing more than the geometric locus of the points of that stroke, taken with respect to its two foci.

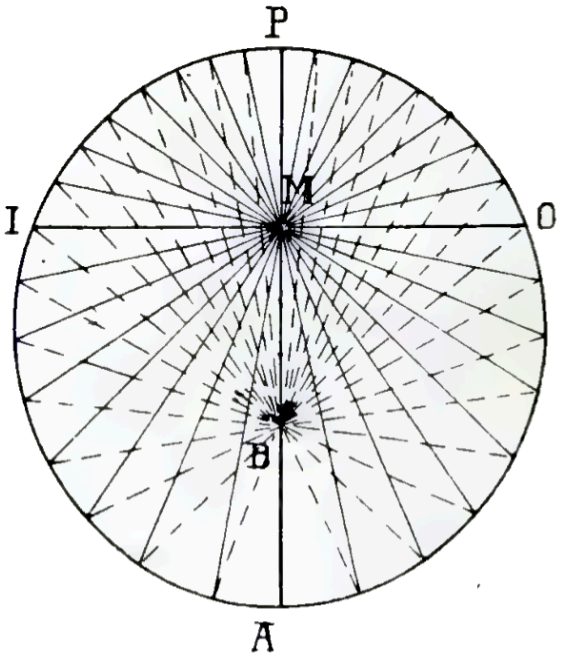

Fig. III.

Every point of the ellipse has its fixed geometrical position relative to the two foci, in such a way that the sum of the distances from any point on the line to the two foci is always the same. In Fig. III, for example, the sum of the distances from *M* and *B* to any chosen point on the elliptical line is equal. In other words: in Fig. III we have shown the

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distance from a given point on the line to *M* with a solid stroke, and the distance from that same point to *B* with a dotted stroke. Now, from every point on the elliptical line, the sum of the solid stroke to *M* and the dotted stroke to *B* is always equal. If we want to draw an ellipse geometrically and correctly, the simplest method is to begin by fixing the positions of the two foci. This immediately determines the geometric "eccentricity"—the distance between the two focal points. We can do this, for example, by pushing two pins upright into the paper at *M* and *B*, and tying a loose string around them, which we then pull tight with the tip of a pencil. Suppose we place the two pins at *M* and *B*, tie the string loosely around them, and pull it tight with the pencil-point at *I*, so that the string forms the broken line *I M B*. We then draw a stroke around *M* and *B*, keeping the string taut the whole time. In this way we ensure, in an artificial manner, that the sum of the lengths of the two parts of the string—from the pencil to *M* and from the pencil to *B*—remains constant. Thus we obtain, by this artificial method, a correct elliptical stroke.

All this is still nothing more than locating points by measurement. But we already know that ratio of measure is *form* in *its origin* (see p. 12). So it would never occur to us to question the correctness of the geometric measurements concerning the ellipse. No, we gladly accept these measurements, and *within* those determinate measures we express the

formative-mathematical character of the elliptical line. The geometric drawing of the elliptical stroke serves as the framework we use as the basis for our formative explanation. Put without comparison: through the word we recreate the geometric drawing as an outward expression of formative conceptual illustration.

Elliptical line in formative mathematics.

The elliptical line, in the strict and formative sense, is the fundamental, formative transformation of the circle-line—the formative *extension* of the circle-line. This extension proceeds from the original centre *M*. From *M*, the rays continuously extend, and at *A* this extension reaches its maximum. As the ray extends, the line that is born from the rays also extends. Thus the elliptical line is a circle-line under heightened tension. In the two halves of the ellipse, *P O A* and *P I A*, every pair of points lying at the same "height" (for example *I* and *O*) has the same degree of tension. But within each half, the tension of the line varies from point to point, because the amount of ray-extension varies from point to point. The point *P* is still an unextended circle-line point, and the ray *P M* is still an unextended circle-ray. From *P*, the elliptical extension begins and increases until it reaches its maximum at *A*. We may call pairs of rays that lie in the extension of one another "ray-

tracks" (*straaltrekken*). Two "marked" ray-tracks are *I O* and *P A*. *I O* is a pair of equally extended rays. *P A*, by contrast, pair of rays in which one remains a wholly unextended circle-ray (*P M*), while the other (*M A*) is extended to its maximum.

All this can indeed be expressed in the metric determinations of geometry. But it is also something essentially different from mere measurement: it is fully formative language, because it expresses the working-out of the formative relation between ray—in the strict, formative sense, and line—in the strict, formative sense.

Reaction of the elliptical line.

Just as there is counter-action from the circle-line upon the circle-ray, so too is there counter-action from the elliptical line upon the elliptical ray. The counter-action of the circle-line upon the circle-ray is concentrated in the single centre of the circle: from that centre the circle-rays issue, and back toward that centre the line works in return. The counter-action, however, of the elliptical line upon the elliptical ray is concentrated in the second focus. From the first focus, or original centre, the elliptical rays go out, but the elliptical line works back toward the second focus. In this way the second focus is indirectly born from the first: the second focus is the concentration of the counter-action of the elliptical lines upon the elliptical rays.

The second focus and the elliptical plane.

Just as the circle-rays "die" under the counter-action of the circle-line and "rise again" as the one radiation of the circular plane, so too do the elliptical rays die and rise again as the one radiation of the one elliptical plane.
The unity of the circular plane is concentrated in its single centre, because it is toward that centre that the circle-lines work back. The unity of the elliptical plane is concentrated in the second focus, because it is toward that point that the elliptical lines work back. The circular plane is born from the single centre, and in that centre its completed unity is realised. The elliptical plane is born from the original centre, but its unity is realised—completed—in its second focus. The rays that go out from the original centre M, which we may call primary rays, do not lead to plane-formation. On the contrary: they disturb the unity of the forming plane. The rays, however, that go toward the second focus B, which we may call secondary rays, do lead to plane-formation. For in their own centre they are gathered into the one radiation of the one elliptical plane.

Emittance of the second focus.

The second focus is born from the first; it is "emitted" (*uitgezonden*) from the original centre

as the reaction-result of the elliptical lining. Elliptical eccentricity is therefore, in formative terms, something quite different from “the distance between the two foci”. Elliptical eccentricity is, in formative terms, the emission of the second focus from the original centre. In the first stage of elliptical determination this eccentricity is not yet “fixed” as a definite distance between the two foci. In this first stage the second focus is emitted toward infinity, and the lining moves with that emission: it becomes ever more excentric—from circle-line to ellipse, and from ellipse to ellipse of ever greater eccentricity.

Fig. IV (p. 120) represents the lining of the elliptical plane as the first further cosmic determination out of the cosmic circular plane. There is not yet a *definite* elliptical line; there is only lining issuing from the already-determined, original, "in place", centre. The secondary focus is not yet “set” to any definite position; it exists only as emission, determined solely as outward "extension". What the arrows and the cross-sign indicate in fig. IV will be explained in the following sections.

Action and reaction in the elliptical line.

Besides the action and reaction between elliptical rays and elliptical lines, there is also action and reaction

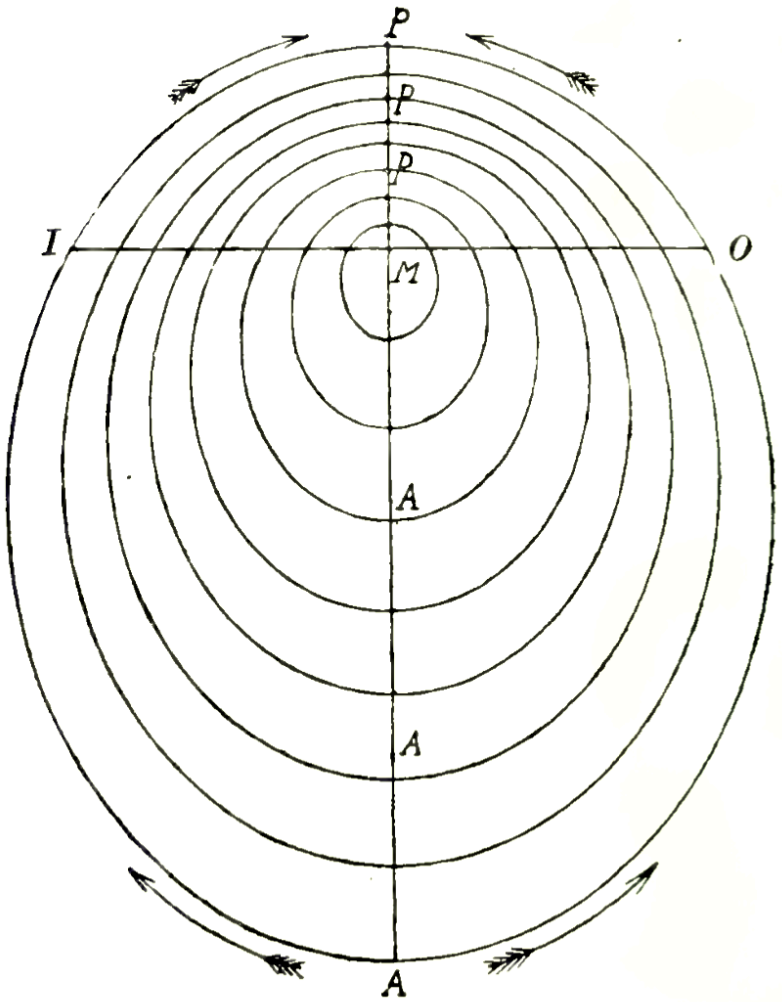

Fig. IV.

Birth of the elliptical plane. The emission of the secondary focus into the infinite. Absolute of third order, or the second cosmic primary movement.

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within the elliptical lines themselves — action and reaction from line-point to line-point. There is, after all, a difference in extension, a difference in line-character, across the ellipse, and this difference varies from point to point. From *P* (Fig. IV) outward, the extension of the line increases to both right and left. From *P* onwards, the system of lines acquires an increasingly receptive or extension-receiving character. Thus, within the elliptical line itself, there is a relation of activity and passivity: activity goes out from *P* into the line, and that activity becomes a received passivity that increases the closer the line-points lie to *A*. Since all passivity "reacts," a reaction therefore goes out from *A* — a resistance of the line back toward *P*. This does not take place in only a single line of the elliptical plane, but in all the lines — in the line-system as a whole. The arrows in Fig. IV indicate this reactional striving of the lines from all *A*-points back toward all *P*-points.

The cross-mark in the elliptical plane.

The elliptical plane, as the first cosmic determination after the cosmic circular plane, is an elliptical plane that runs out towards infinite eccentricity — that is, into a "parabolic" plane. It is cosmically determined, but not yet determined into any single, concrete cosmic unity; it embraces the whole collection of all cosmic unities.

Although in the elliptical plane, as a volstrektheid of the third order, no definite eccentricity

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has yet been fixed at a determinate distance, the direction of the eccentricity is already determined. And therefore, together with this eccentric direction, the other directions indicated in figure IV — the so-called "cross-marks" — are also determined.

The elliptical ray that extends in the eccentric direction (we shall call it the *A*-ray) passes through the most extended line-points — points extended, indeed, to infinity. The ray itself becomes ever more extended or "drawn-out," extended to infinity. The reaction within the line-system, from point to point, goes out from this *A*-ray, spreading right and left toward the *P*-points.

The *P*-ray is the counterpart of the *A*-ray. It passes through those points that remain unextended circular points; and the ray itself is an unextended, a "remaining" circular ray. The reaction from point to point in the lines goes back toward the *P*-ray. Since the *P*-ray and the *A*-ray are counterpart rays, they together realise a polar ray-unity. They form one ray-pair.

The ray-pair *I O* marks a very definite distinction when compared with *P A*. Whereas *P A* is the unity, within a single ray-pair, of an unextended circular ray and an ever more extended elliptical ray, *I O* is the ray-pair of the only two equally-extended rays in the entire elliptical plane. In the two halves of *I O* there is no difference except a difference in direction. But that difference is neutralised because the directions oppose each other

diametrically. Thus *I O* is a uniformly extended *straaltrek* (a stretch of rays) without any internal polarity. In this *straaltrek* there is no thrust and counter-thrust, no interplay of activity and passivity, such as *P A* possesses in an infinite degree. *I O* "lies" stretched out, and therefore has the character of an extended line. As such it is "receptive", it is "passive", in relation to the *P*-ray.

The *P*-ray is purely and absolutely a ray, and is therefore the polar counterpart of *I O*, which has the character of a stretched line. The right-angled relation of the *P*-ray and *I O* is certainly different from the right-angled relation of absolute Space and absolute Time as *Heelaltegendeelen*. And yet the absolute orthogonality of the *Heelaltegendeelen* is repeated in the *P*-ray and *I O*. The right-angledness of the Heelaltegendeelen is absolutely unbounded and undetermined—it is no particular direction whatsoever—but it becomes cosmically determined direction in the *P*-ray and *I O*. These two *straaltrekken* are therefore concrete "directional" realisations of the *Heelaltegendeelen*. And as such directional realisations we must also find them again in relative natural phenomena.

The P-radius as a relative natural phenomenon.

Look again carefully at what the *P*-radius really is. It is a circle-radius, a single definite circle-radius; it

along its entire length it passes through line-points that are still *circle*-line-points. In the *P*-radius, the entire line-reaction of the ellipse is concentrated back into circle-line-character. And since the reaction of the line upon its radius-counterpart produces the closed unity of the *plane*, the *P*-radius contains the formative *plane*-unity of circle-radius and circle-line. The *P*-plane is, in its own reality, a portion of a circle-plane — a circle sector of infinitely small breadth and infinitely great length. The *P*-plane is a specific case of the circle-plane: the directionally-determined case of the circle-plane. And in exactly this sense we have already rediscovered it in relative reality: in free fall. Free fall reveals itself, through its second-power behaviour, as a circle-plane action — a circle-plane action determined as "circle-thrust". In free fall we encounter, in relative form, the absolute reality of the circle sector with infinitely great, indeterminate length and infinitely small breadth. The gravitational reaction is, in the cosmic *P*-radius, fundamentally determined cosmically as "thrust". Wherever we observe a definite gravitational thrust, the *P*-radius is at work formatively.

***I O* as the counterpart of the *P*-ray in relative natural phenomena.**

We said earlier: *I O* is a uniformly-extended, internally counterpart-less ray-stretch. Within this ray-stretch there is no thrust and counter-thrust of activity and passivity. *I O* simply lies extended, and therefore has

the character of an extended line. As such it is receiving, it is "passive", in relation to the *P*-ray.

All of this is clearly characteristic of what physics calls “inertia.” Inertia is not a “negative property” of bodies, but the passivity by which they receive motion and *maintain that motion unchanged*. Inertia is unchangeably-received motion — therefore a uniform line-motion. And insofar as inertia works in a particular body, it “marks itself” in a particular motion-stretch (*bewegingstrek*) of the moving body. In that case, this specific inertia-motion is the relative realisation of *I O*: a uniform line, inwardly without any counterpart-structure, conservatively receiving, and determined into a specific "stretch". A specific inertia-effect is: a *time*-line that has come into the determined state of uniform continuation — just as a specific gravity-effect is a *space*-ray that has come into the determined state of centrally increasing quantity. A specific inertia-effect is the counterpart of a specific gravity-effect, just as *I O* is the counterpart of the *P*-ray

_I O_ as specifically distinct from _P A_ in relative natural phenomena.

I O marks a certain distinctness from *P A*, and yet we may not call *I O* and *P A* a *direct*

counterparts. For there is no direct relation of activity and passivity between *I O* and *P A*. *I O* is only indirectly the counterpart of *P A* because: *I O* is the counterpart of the *P*-ray, and the *P*-ray is, in turn, one counterpart with the *A*-ray.

Where, then, shall we find this peculiar, distinctly-marked kind of difference — a difference that is a difference, yet only an indirect polarity? Where shall we find it clearly marked in the way it exists in absoluteness: as “stretches”, as characteristic “traits”?

We find it in living organisms of different species. From species to species organisms differ, and yet they are not direct counterparts of one another. And among all those species we find two whose typical traits reflect *I O* and *P A* respectively.

I O we find, relatively, in the snake. The characteristic of the snake, reduced to absoluteness, is identical with the absolute characteristic of *I O*. The snake is taut-lined, uniformly continuous. Its body is not divided into distinctly-marked parts in which one part realises pushing and another counter-pushing: the snake "creeps".

Together with all living organisms, the snake shares of course the “openness” of organic form — a form that comes and goes, grows and outgrows, dies. That openness in the snake is, as in every organism, the general manifestation of the absolute openness of the Universe-

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counterparts. But in addition to this, the snake is distinctly "marked" as uniform horizontality. It is marked as the natural symbol of a definite course of time, as the natural symbol of movement-receiving *and movement-maintaining* continuity. It is the natural symbol of traditional *inertia*.

These reflections give me a welcome opportunity to say something about natural symbolism in general and about our modern way of thinking. Modern human beings have long abandoned the view that “things” or “objects” or “facts” could, in themselves, be the bearer of truth. Modern humanity knows very well that truth lives, and that it gives *meaning* to a “thing” or an “object” or a “fact”. For that reason, it seems completely ordinary when, for example, we acknowledge truth in a biblical story apart from all correctness of things or correctness of objects or correctness of facts. Modern people rightly laugh at old-fashioned refuters of the Bible who say that biblical stories are not historically accurate or do not agree with the results of scientific research. Modern humanity knows that the Bible reaches deeper than precise knowledge: the Bible gives outward form to the "meaning" of an ongoing event by means of a particular story. Such a meaning-revealing story is called a "symbolic presentation".

But that same modern human being who gladly recognises the symbolic truth of the Bible, and readily defends it against one-sided factual knowledge and

empirical science, still suspects very little of the symbolic truth of *nature*. Symbolism is formative expression — the unity of outwardness and inwardness — *for example*, in a story. But the whole of nature is formative expression, and therefore the whole of nature is symbolic truth, just as much as the Bible.

In formative mathematics, symbolic truth in nature seeks to become exact. For that reason, it may not contradict exact factual knowledge — something the Bible may do, since it does not claim to be "exact". Exact symbolism is exact formative expression, and it will gladly allow itself to be checked by factual knowledge, because it is the counterpart of factual knowledge: polar to it, one with it in a complementary way, the inner meaning of outward factual knowledge. But it will not allow itself to be limited by one-sided factual knowledge. It reaches deeper than factual knowledge alone.

Furthermore, much biblical symbolism is, in fact, *natural* symbolism. The old story of Paradise, for example, is clearly natural symbolism. In that story the serpent is the symbol of traditional inertia, even though this symbol is not stated explicitly. The serpent in Paradise tempts the human being toward the desire for "knowledge of good and evil" — that is, toward science of moral norms fixed for all time. And in a very true insight into human nature, that desire is characterised as a desire "to be as God." Traditional inertia is *seemingly* spiritual, but in truth only intellectual, with a semblance of spirituality. Tradition-

inertia is, in human knowing, the grip of one-sided intellect — intellect that cannot "create." Intellectual inertia is the human meaning of the Paradise-serpent. Intellectual inertia is "cunning": quietly watching, confidently holding on to once-received life, it criticises everything that creates new life. Intellectual inertia is also "bashful": its criticism of new creation is always a clothing-over of "naked" truth. Life is creative insofar as it is naked; living knowing is creative insofar as it is naked knowing, naked truth — truth laid bare, truth made outward enough to be beheld. Tradition-inertia is also typical femininity — but one-sided femininity, a merely one-sided feminine trait. Fully living femininity will overcome that one-sidedness. "The woman shall crush the head of the serpent."

This is what biblical natural symbolism tells us. Whoever defends the symbolic truth of the Paradise-story against one-sided factual knowledge should remember that he is defending *nature*-symbolism. And he should ask himself whether nature-symbolism does not have just as much right to be translated into direct verbal expression as narrative symbolism. Only when nature-symbolism has been put into direct language may we ask whether it is exact, and whether it has thus been reborn as exact beelding (ensouled factual knowledge).

If we express the serpent-symbol in direct language,

in connection with all that has preceded, then we must speak as follows:

The one appearance-driven Creative Principle brings the absolute Cosmic Time into definite cosmic absoluteness, and that definite cosmic absoluteness into definite, relative, beholdable appearance.

Absolute Time expresses a fundamental determinate "tendency" in the elliptical plane — the absolute of the third order. We meet that same determinate tendency again in the relative phenomenon of "inertia", and again in the relative appearance of the "serpent". We may behold the serpent as a relative appearance-trait of Absolute Time, insofar as we thoughtfully offer up our self-willed intention to the Universal Consciousness (*Heelalbewustzijn*), and thus experience within ourselves the one Creative Principle as *the inherent impulse of the Absolute to manifest itself outwardly* (*verschijningsdrift*).

P A as determinate distinction from *I O* in relative natural phenomena.

The experience of the one appearance-driven Creative Principle is thoroughly *human*, and certainly has nothing to do with any kind of specialised discipline. The poet of the Paradise-story objectified it as the symbol of tradition-inertia in the serpent. The first Christians objectified it as their Christus-symbol, the “fish.” It is well known that the “fish” was a greatly cherished Christ-

symbol among the earliest Christians. Various scholarly hypotheses attempt to explain this symbol. But no attempt has yet been made to explain it constructively, in relation to the symbol of the Old Testament, the "serpent."

The poetic beholding-urge (*aanschouwingsdrang*) of the first Christians did not choose that symbol "deliberately." Their beholding-urge was genuinely poetic and therefore spontaneous. Neither did they choose it "by chance." Their choice was a constructive reflex-movement—a movement that, as a reflex, can only be seen positively after its act. The entire structure of the human body is a constructive reflex-movement. Why should the formation of religious nature-symbols not be the same—symbols with which the true believer is as inwardly one as with his own body?

Let the Universal Consciousness burn through your self-willed intention down to under-conscious knowing! Then you will recognise the "fish" as the relative realisation of the ray-tendency *P A* in the cosmic elliptical plane.

This tells us the *type* of fish: a firm head and upper body, and a lower body that becomes progressively more elongated, until it displays the flexibility of the fish's tail—whose supple motion so clearly reveals the part that thrusts and counter-thrusts; here, thrust and counter-thrust are inscribed. There is a characteristic difference between the uniform "crawling" of the serpent and the upward-thrusting movement of the fish, whose swimming drives from the lower part

toward the upper. The fish typifies firmness and suppleness, masculinity and femininity in one. There is an essential connection between the fish-symbol and the words which the Alexandrian Gospel [1] puts into the mouth of Christ: "I have come to dissolve the works of (one-sided) femininity."

All this, reduced to absoluteness, is the ray-tendency *P A*.

Is there then, in the appearance-world of forms, no one-sided masculinity?

No. Masculinity does not "appear" as masculinity. Masculinity appears in and into femininity, just as ray appears in and into line. Masculinity does not appear, as masculinity; and certainly one-sided masculinity does not appear. One-sided masculinity, precisely as one-sided masculinity, must be absent in the appearance-world of forms.

The cross-sign of the cosmic elliptical plane in relative natural phenomena.

The two marked ray-tendencies of the cosmic elliptical plane—the "cross-sign" in that plane—are reproduced, in relative form, in the great structural tendencies of the human body, which presents itself to beholding in the gesture of a cross, as one single structure given in one single moment of beholding. The great vertical

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1) Schoenmaekers refers to the "*Alexandrijnsche evangelie*" ("Alexandrian Gospel"), by which he means the lost *Gospel of the Egyptians* (c. 120-150 CE) cited by Clement of Alexandria (not to be confused with the later Coptic gospel of the same name). Fragments of this text are included in *The Apocryphal Gospels*, translated and introduced by Bart D. Ehrman and Zlatko Pleše (Oxford, 2011).

bodily tendency is *P A*: firm above, and lengthened downward. The active, giving, firm, masculine head imparts its life to the body, and marks its firmness in the forehead — the "bastion" of the head. And the body receives, and marks its receiving, in a lengthening movement downward; it is varied in many shifting relativities, yet it still shows one continuous movement toward ever more taut linear tension, toward an upward-driving counter-movement. How much lengthened firmness, how much lengthened-springing decisiveness there is in the "tread" of a healthy human foot! The great horizontal bodily tendency, the characteristic of the arms, is *I O*: evenly continuous, without marked polarness — the outstretched arms are one and the same great tendency, a gesture of supple receptivity and assured giving-over, continuing evenly.

I hope to work out the formative structure of the human body in the second part of this work.

But already we may see that the formative construction of the human body does not have the circle as its ground-constructive form, as Leonardo da Vinci supposed, but the ellipse.

For the precise intellect, it will be very difficult to give itself thoughtfully over to unintentional-formative reason in such a way that it rediscovers the marked cosmic elliptical tendencies in the human body. Thoughtful surrender is always difficult, but it is most difficult for the precise intellect, which has learned to look intentionally for truth,

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and has forgotten how to accept truth without intention.

But once it can surrender, it will not only see the human being "die upon the Cross", as all organisms die upon the Cross; it will also see the structure of the human body take shape, in its closed formative tendencies, as a Cross-life.

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VI.

ABSOLUTENESS OF THE FOURTH AND FIFTH ORDER.

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Absolute of the fourth order.

The next cosmic initial-movement adds one more relativity to the preceding one: the eccentricity of the elliptical plane is now "set" to a definite distance. The eccentricity remains a formative movement: the continual sending-out of the secondary focus from the original centre. But around this "set" eccentricity, the elliptical lines now move without *further* outward sending — that is, they run parallel to one another. As a result, we now obtain two ellipse-planes: an inner plane, whose line-movement is not parallel, and an outer plane, whose line-movement is parallel. The (original) inner plane is thereby given a determinate "boundary", and that boundary is one particular elliptical line. See Fig. V, p. 138.

Soon we shall ask what takes place within that single determinate ellipse-line, especially at point *P*. But first, a few further clarifications of terms used in the previous chapter:

Extension, tendency, direction.

In the previous chapter I spoke of ray-"extension" (*straal-strekking*) and line-"tendency" (*lijn-streving*). Let us not confuse extension or tendency with "direction".

The ray "extends" from its determinate centre. The absolute Space-ray has no

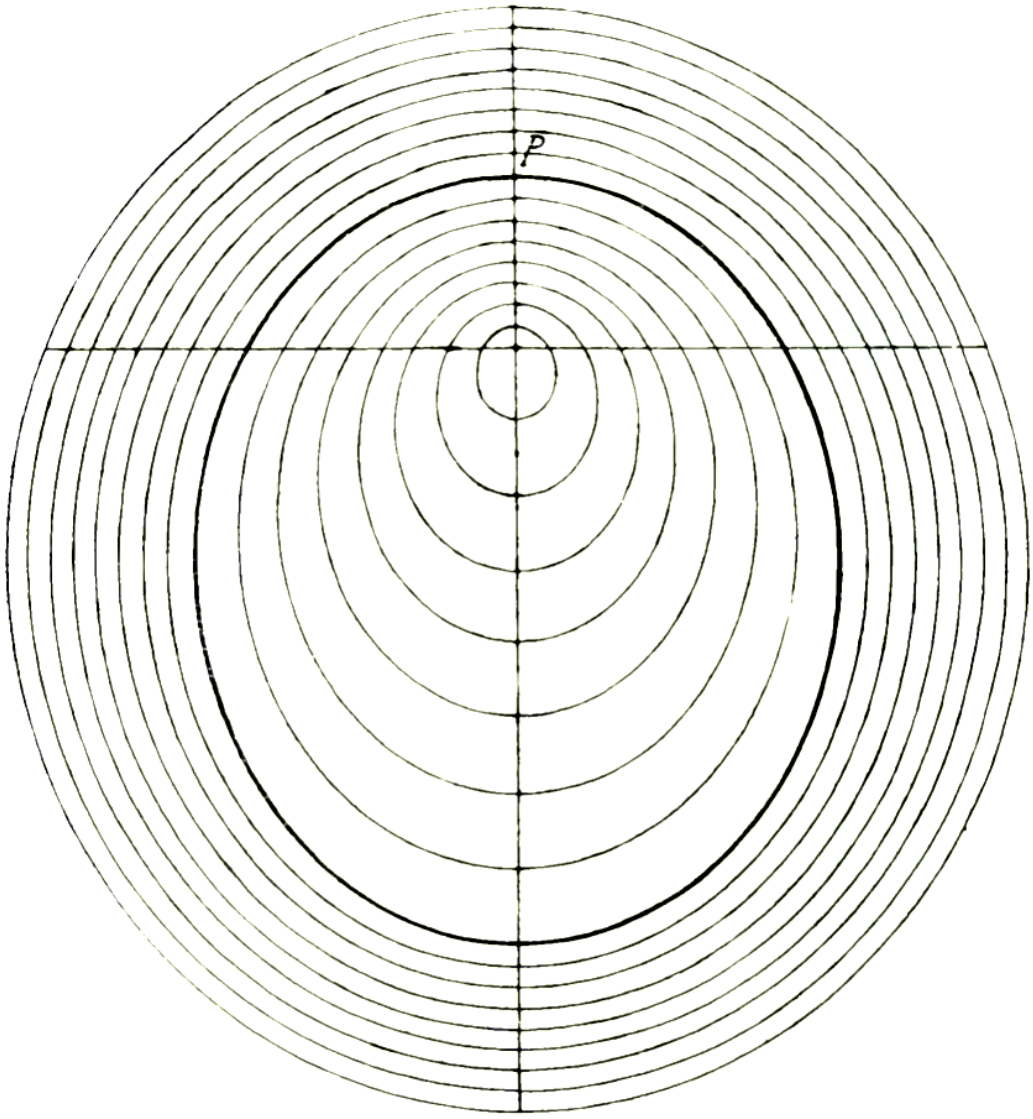

Fig. V.

The eccentricity "set" at a determinate distance. The birth of the determinate ellipse-line. Absoluteness of the fourth order, or the third cosmic initial movement.

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extension, because it proceeds from no determinate centre.

The line "tends", widening about its determinate centre, and it "counter-tends", working back toward its determinate centre. The absolute Time-line has no tendency, because it lies around no determinate centre.

In the ellipse, the line also "tends" from its point of beginning-extension, and in the ellipse it also "counter-tends" from its point of maximal extension.

The essential distinction between "extension" (*strekking*) and "tendency" (*streving*) is rooted in the essential distinction between ray and line. Quantitative mathematics does not recognise this essential distinction, because it does not recognise the formative, essential difference between ray and line.

Quantitative mathematics knows only "direction". Now, direction is possible "on the basis of" extension and tendency. We have already encountered direction in the elliptical plane as the second cosmic initial-movement. That plane must bear one determinate plane-direction "on the basis of" its ray-extension and line-tendency within one determinate plane. But direction *as such* is only a geometrical determination of place — it is not formative.

“Geometrical” determination of place. — There is a “geometrical” and a “formative” determination of place. The geometrical place of a point is determined by the meeting of directions. Through the coming-together of extension and tendency, the place

of a point can also be determined — as we shall soon see. But determining a place through extension and tendency happens on the basis of formative relation, and is therefore itself formative. The “formative” place is the "taking-place" (*plaatsgrijpen*) of a formative construction. Formative place therefore cannot be determined exactly unless the character of the formative construction that takes place is itself stated exactly.

No "curved" direction.

A direction, strictly speaking, is always straight, and is therefore called a “direction”. What appear to be curved directions are only apparently so.

A simple example: a locomotive runs in a straight direction without danger of derailing. When it must run in a circular direction, it continually tends to leave the circular track along the direction of the straight tangent. The circular direction is only apparent. In reality, it is an infinite number of starting-points of straight directions, joined together so closely that they appear as a single circular direction.

Another example: when mechanics says that a fired cannonball moves “in the direction of a parabola”, or more precisely, “in the direction of an ellipse with very great eccentricity”, it knows perfectly well that the projectile’s path is only apparently a single curved line. Two "straight-line" force-directions act on a fired cannonball: 1st gravity, and 2nd inertia,

which is “straight-line” in the direction given by the cannon. The joint working of these two directions results in the projectile’s path. Every point of that path is a point of straight initial direction; but these initial points are so combined by the quantitatively constant action of inertia and the quantitatively continuously increasing action of gravity, that they appear to form a single curved direction.

An extension (*strekking*) is of course also straight — or rather, “taut”.

A tendency (*streving*), however, is inherently curved, for it is essentially the working of a line about a centre. A circular line-tendency is curved but has no beginning or end: the circular line-tendency only “yields”, widens, and works back again in reaction toward its determined centre. The elliptical line-tendency is curved and does have a beginning point: *P*; and an end point: *A*. The elliptical line-tendency does not merely yield and widen with its reaction toward the secondary focal point; it also tends from line-point to line-point, beginning at *P* and reacting from *A*.

Elliptical line-tendency and direction within.

All mechanically produced, apparently single curved “directions” are, as artificial constructions, merely directions. They are not realised “on the basis of” a genuine tendency. They are not truly formative; they are purely quantitative,

and are therefore fully knowable once we are able to calculate and work them out quantitatively.

A naturally curved line, however, is a formative structure, and is therefore a tendency (*streving*). On the basis of its tendency, direction can arise within it. But at root it is something essentially different from direction: at root it is tendency. This tendency can be expressed exactly in formative language; and when a direction arises from that tendency, *we can also verify our exact-formative account quantitatively*. For although such direction arises from tendency, it nevertheless is a direction, and as such a quantitative reality which can be quantitatively known.

We shall now give an exact-formative account of what happens in the determinate elliptical line—the line we have come to know as the absolute of the fourth order, or the third cosmic primal-movement. In the next chapter we shall also see direction arise within that line—direction which we find again relatively, for example in the direction of the Earth's elliptical orbit. Then we can and must verify our formative-mathematical account quantitatively. But for now we must remain strictly formative-exact and apply our own control: the *formative* figure itself.

At Point P.

At point *P* (Fig. V, p. 138), three planes come together:

1st. the elliptical inner-plane.
2nd. the elliptical outer-plane.
3rd. the *P*-ray, which—as we have already seen—is itself essentially a plane: a circular sector of infinite length and infinitesimal breadth.

These three planes are, at point *P*, not merely adjoined but interlocked.[1)] For they are different and yet one in a polar way: each is reshaped into its characteristic determination by the others. The bounded inner-ellipse-plane reshapes the outward-bounded outer-ellipse-plane into a determinate plane of parallel elliptical lining. And both ellipse-planes (through their line-reaction) continually reshape the *P*-ray into the *P*-plane.

Thus, at *P* for the first time, an interlocked and polar diversity of planes is realised. *P* is enclosed by planes. In polarity to this enclosure, it must also un-close itself—it must "radiate" outwards. That radiation from *P* will be a radiation of interlocked plane-activity: a "plastic" (body-forming) radiation, a radiation without a determinate directional possibility.

In other words: *P* will radiate outwards in all directions—just as the cosmic space-centre radiated in the first primal-movement—but now this radiation will be "plastic". From *P*, for the first time cosmically, the "body" will be born.[2)]

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1) When I speak of *P* without qualification, I mean the *point P*. When I mean *the ray P*, I will expressly speak of the *P-ray*; when I mean *the plane P*, I will expressly speak of the *P-plane*.

2) "Plastic" (*plastisch*) in this context designates the formative transition from plane to body — the moment in which multiple planes interlock and begin to enclose space. In this sense we may contrast *vlakwerking* (plane-activity), which is flat, expansive, and non-enclosing, with *plastische werking* (plastic activity), the formative shift toward enclosure, thickness, surface, and body.

Why must the radiation from *P* be without a *determinate* direction and thus spread everywhere? Because precisely at *P* everything that could possibly carry a determinate direction is, in essence, abolished. Striving and stretching are indeed different from direction, yet in any determinate stretching and determinate striving, a definite direction is always already present as an inherent possibility; determinate stretching and determinate striving are, by their very nature, direction-*bearing*. But at *P*, the determinate ray (the *P*-ray) and the determinate line (the elliptical line lying between the inner and outer planes) are both fundamentally abolished—reduced to a single *point*. At *P*, therefore, nothing remains that could bear or convey a particular direction. The plastic radiation from *P* must therefore be positively undetermined, just as the radiation from the cosmic centre of space is undetermined in the first cosmic beginning-movement.

The plastic radiation from *P* will be "spherical". It is already evident that the plastic radiation from a point, in absolute reality, must be perfectly regular—and therefore spherical. Moreover, everything related to ray and line that reaches full determination in *P* is circular ray and circular line. Consequently, from this point, plastic circular radiation and circular formation must arise—and plastic circular radiation and circular formation are nothing other than spherical formation.

After all that has been discussed, we may summarise what happens at *P* as follows:

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At *P*, fundamental circular radius-stretching and circular line-striving are concentrated; thus, from *P*, specific circular radius-stretching and specific circular line-striving must again be realised. The determination of this realisation is not a specific direction. All specific directional possibilities are abolished at *P*. The determination of this realisation is the fully determined, or fully enclosed, unity of radius and line—the bodily unity from and around the plastic centre; it is the "plastic" unity of circular line and circular radius.

In other words: *P* is, in the strictest sense, the fundamental "intersection" of a specific circular radius and a specific circular line—the fundamentally complete enclosure of a specific circular radius and a specific circular line. Thus this point must also emit fully enclosed circular radiation and circular lining: it must result in spherical formation, and thus also in spherical surface.

The absolute spherical formation is easily observed in all given spherical formations of so-called "free" mass-substances, that is, substances that have not yet been "set" into a specific form.

Absolute fifth-order.

The surface around *P* would, without further initial determination, expand infinitely. Surface-creation would then unfold

entirely into a single surface, a single body. Yet we see that there are many bodies in the Cosmos. Our formative impulse of thought must therefore of its own accord advance to a further initial determination: the absolute of the fifth order. In grasping that absolute, we experience—carefully, yet at the same time inviolably spontaneous—the one appearance-driven Cosmic Force as setting bounds and limits to the expansion of the surface of "the" cosmic body. Thus the surface-creation from P becomes the creation of a definite and restricted boundary—an enclosing form that is itself enclosed. In other words, the surface becomes a surface that no longer expands: a "still" surface, or "figure".

By approximation, we find this again in every "set" surface, and most fundamentally in the set form of the "planet", especially our earth. The sun is not the fundamental body of the Cosmos; rather, the "planet", above all the earth. The sun may be characterised as fundamental space-radiation; it is also in a sense a "body", because it receives the reaction of the earth's plasticity. But *in relation to the earth*, it must be *characterised* as the most fundamental relative realisation of absolute cosmic space. And *in relation to the sun*, the earth must be *characterised* as the most fundamental relative realisation of absolute cosmic figure.

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Bodily life

Every body has its own peculiarity; and characteristic "body-traits" can speak to us of particular space-formations prior to the birth of "the" body. We have seen this, for example, in the cross marked out in the great structural traits of the human body. Yet all bodies share, as bodies, one bodily life in common, within which we can distinguish three different acts:

In *P*, we said, everything that could, formatively, bear a determinate direction is fundamentally abolished. The plastic centre is therefore, in absolute reality, wholly free of direction. Its first act is therefore to float. That first act is the deepest act of the body as body. It is *depth*-act; it is depth itself. We find this floating again, relatively, concentrated in the "point of balance" of every body, and—as an organic gesture—in the balanced, living "rest-stance" of organic bodies.

The "floating" then unfolds further into swelling: the plastic radiation. Swelling takes place as the stretching of the plastic rays through and into lining—as plastic *length*-stretch, that is. Swelling is the bodily act of length, bodily length itself. We find swelling again, relatively, in the "volume" of every body, and—as an organic gesture—in the "growth" of organisms.

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But the lining of the swelling “reacts”, and through this the body becomes heavy—*plastically* heavy, or “massive”. This plastic heaviness-reaction is the plastic line-reaction back toward the plastic centre; it is the act of *breadth* or *width*—breadth itself. Relatively, we find plastic heaviness again as the “mass” of every body, and—as an organic gesture—in the “ageing” of organisms. The ageing of an organism is the overcoming, plastic counter-action of an outwardly formed shape towards its formative working.

The “form” is not an act "of" but "upon" the body.

The determination of form is, as we saw in the article on the absolute of the fifth order, no longer a determination of the body, but a new determination upon the body—and, in the final instance, an act of the one Creator upon the body, His creation.

In every bodily form we find, in relative guise, the absolute of the fifth order or fourth cosmic beginning-movement.

The bodily form is the body-shape as a single moment of appearance. And as such, it is an object of *direct* sensory perception. The “openness” of form (the passing and re-passing of one form into another) is not *directly* perceptible to the senses. We must interpret the sensory data

through remembrance of earlier formations and fore-feeling of later formations in order to perceive that openness. Direct sensory data are only "moments" of appearance.

But form is a moment of appearance. When it becomes an object of formative beholding, that formative beholding intervenes directly in sensory perception: it works through the senses, "enlivening" the senses themselves—the very organs of sensory perception. Therefore it becomes sensory-creative. It is the sensory experience of the one appearance-driven Creative Force, and must therefore create sensorially. It continues to work on in what we call "formative art"; formative art is form, through and through. But the beholding of form is already creative in, and through, the beholding itself. Its fresh, immediate, "inspired" act is not "art". Art arises after inspiration. The inspired act of form-beholding is so immediately one with the beheld form that its outward manifestation coincides directly with the sensorially perceived form itself.

But what the beholding of form does to the form itself can be sensorially seen only by the beholder. The beholder may "fix" the memory of that immediate objectification—for himself and for others—if he is a formative artist. In formative art we then all find, indirectly, the moment-appearance of the absolute

of the fifth order made relatively present once more. The formative artwork is not a “reproduction” of the “visible”, but a remembrance of the artist’s immediate, creative act of beholding—a beholding in which a form-appearance was encircled with the artist’s own creative life.

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VII.

ABSOLUTENESS OF THE SIXTH AND SEVENTH ORDER.

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First cosmic direction

Now that every determinate possibility of direction has been abolished in the plastic centre, our impulse to think—because it remains counterpart-thinking—demands a return to determinate, direction-bearing formation, in order there to complete the determinate direction from possibility into actuality. This can take place immediately only because the plastic centre, together with its plastic out-formation, begins to move within the determinate elliptical line of which *P* is the point of initial extension. For that line is, before and in *P*, the most outward or most fully worked-through actuality, and the only determinate, direction-bearing line before and in *P*. Through this movement of the plastic centre together with its body, *P* becomes the starting-point of a determinate bodily circuit in a determinate line around the original cosmic centre. Through that circuit the determinate elliptical line becomes an elliptical "orbit", on the basis of its fundamental "striving": the direction of the circuit follows the action of the line-striving towards *A*, and continues with the line-reaction, back towards *P*. This movement was not brought forth in the previous cosmic beginning-movement. It requires an act of new determination by "the" Creator upon the body. It can only begin through an essential

creative impulse to one side of *P*, across the determinate elliptical line.

This first cosmic bodily circuit is the absoluteness of the sixth order. For it adds yet another relativity to the previous order, namely "speed". The first cosmic speed is speed within a determinate cosmic beginning-movement that is cosmically absolute—now an absoluteness of the sixth order. Speed is the only relativity now added to the earlier order of absoluteness. For the actual direction of the body is not a new relativity: that determinate direction is already carried along, as determinate possibility, in the determinate line-striving of the determinate elliptical line, which is inherently direction-*bearing*.

The speed in this sixth order of absoluteness is relative, but only as a *newly* determined quantity—that is, as initial speed. All its quantitative *working* (increase or decrease) is likewise already determined as quantitative *relation* through the formative determinations before and in *P*. Therefore, the character of the formation must again "betray" itself in those quantitative relations, and thus we gain the possibility of quantitatively verifying our formative statements. As soon as we begin to speak of actual, determinate direction and speed, we enter the domain of quantitative mathematics. The results of quantitative mathematics must then provide us with a "a decisive verification", confirming our formative explanations.

Planetary direction

The absolute, cosmic direction in the determinate elliptical line is reflected, relatively, in the solar system—most fundamentally in the direction of the movement of the planets, especially the Earth, around the Sun. This orbit is certainly something more than merely "direction" and "speed," because it is realised within formative line-striving, one with that line-striving. The orbit takes place, in essence, on the ground of and within formative line-striving, and is therefore itself a new formative act. We shall speak of that new-formative character in a moment. But first we must ask whether the results of quantitative mathematics confirm what we have already said about the formative working of the determinate elliptical line. The results of quantitative mathematics relevant here are gathered together in the well-known three laws of Kepler.

Kepler's first law: *The planets move in ellipses around the Sun, which is at one of the foci of the ellipses.*

The formative reason why a planet—especially the Earth—can move only in an ellipse around the Sun is, after all that has been said, not difficult to find. The determinate direction of an orbit can, in a formative sense, be borne only by a line-striving, and indeed by a determinate line-striving with a striving-beginning point. A circular line,

taken as circular line only, cannot bear a determinate orbit, because as circular line alone it has no determinate, single line-striving, and because it has no beginning-point at which the initial movement of orbit can "take hold." The cosmic determinate line-striving with a beginning-point can be none other than the elliptical line-striving which we came to know as the absolute of the fourth order. The beginning-point *P* is, in the relative reality of the solar system, the perihelion, or "nearest point to the Sun"; the end-point *A* is, in that relative reality, the aphelion, or "farthest point from the Sun."

The formative reason why the Sun stands in one of the two focal points is likewise obvious. The solar centre is, after all, the relative reality of the original cosmic centre of space, one with that cosmic centre of space.

Kepler's first law therefore provides a touchstone for our formative explanation of the ellipse.

Kepler's second law: *The "radius vector" (the line from the centre of the Sun to the centre of the planet) sweeps out equal areas in equal times.*

Formative reason for this law:

A line "reacts" upon the radius and is therefore, formatively, one with the radius; and this unity is

fundamentally, a unity of "plane" (see p. 93). A line-working is thus, in its fundamental unity with its radius-working, a plane-working. *Time*-progression is, in essence, nothing other than *line*-progression. The determinate temporal orbit in the Cosmos is the determinate elliptical *line*. Quantitatively equal times therefore betray quantitatively equal *line*-segments of the determinate elliptical line-reality—*not* quantitatively equal lengths of abstract strokes from a determinate abstract elliptical stroke, but quantitatively equal *line*-segments of the determinate elliptical line-reality. But these equal *line*-segments again betray equal *plane*-segments, for the line is one-in-its-counterpart with its own plane.

Must we not therefore regard those plane-segments—that is, those ellipse-sectors—as concentrated in the *secondary* focal point? For we said, speaking formatively within the measurements of geometry, that the ellipse-line reacts towards the secondary focus, and that therefore the formative unity of the ellipse-plane is fundamentally concentrated in the secondary focus (see p. 117). Certainly: the ellipse-line *in its first stage*—that is, before its becoming an orbit, when there is not yet any "right or left" in it—reacts towards the secondary focus, and for that reason the formative unity of the ellipse-plane is fundamentally concentrated there. But now that, through the body's orbital motion, a real "right" and a real "left" arise within it, the line becomes a fundamentally new line: an *orbital* line, *while remaining within its former determinations of measure*. There must therefore now be a

new reaction within it, and indeed within its old determinations of measure. This new reaction can be none other than a new reaction toward the primary cosmic centre of space.

Equal *line*-segments *of the orbit*, or equal measurable time-intervals, must therefore—reasoned formatively—betray equal plane-segments or ellipse-sectors directed toward the primary cosmic centre of space. Kepler's second law teaches the same. Upon measurement it indeed appears that equal periods of planetary motion yield equal plane-segments, radiating toward the centre of the sun.

Kepler's second law thus provides a confirmation of our formative explanation of the ellipse.

Kepler's third law: *The square of the orbital period of a planet is proportional to the cube of the distances of its centre from the centre of the sun.*

Formative reason for this law:

"The" body reacts upon the ellipse-radii, and does so with its entire bodily essence. For the surface of the body is line, and line "reacts". The line-surface reacts back toward the plastic centre, and through this reaction the body becomes plastically "heavy" (see p. 148). The line-surface then reacts further, with the entire inwardness with which it is one—*as the whole body*—to the original cosmic centre of space. Why

toward the *original* cosmic centre of space? Because the body moves within the *new* ellipse-plane, whose reaction is directed toward the primary cosmic centre. Through this *bodily* reaction the ellipse-radii, through which the reaction proceeds, become “bodily” radii. They must therefore betray their quantitative working in the bodily *third* power, in proportion to the quantitative working of the orbit, which is a "plane"-working and thus, in relation to the ellipse-radii, must betray itself in the *second* power. Kepler’s third law says the same. Measurement indeed shows that the square of the orbital quantity (the measured orbital period) is proportional to the cube of the radial quantity, that is, the distance from the centre of the planet to the centre of the sun.

Kepler’s third law once again provides a confirmation of our formative explanation of the ellipse.

Propagation.

The elliptically directed circling of the body around the cosmic centre of space is borne by formative reality and is one with that formative bearing-act: that circling is itself formative reality.

Behold, then, the formative circling: Because the body begins its orbit to one side of *P*, “right” and “left” arise within the determined

elliptical line. Thus the points “at the same height” of the ellipse now become *distinct* (see p. 116). The infinite formative diversity from point to point within the determined elliptical line becomes fulfilled reality through the orbit of the body. And through that same orbit, the body—within its own plastic centre—takes up that infinite diversity, point after point. The plastic centre "assimilates" within its own formation the infinite diversity of the determined elliptical line. That orbit must therefore, formatively, be a progression of infinite diversity within the progression itself. The absolutely elliptical orbit is absolute “propagation”: continuation with infinite diversity in that continuation itself. We find absolute propagation again in relative reality, for example on earth: reproductive propagation is relatively-infinite diversity in its own progression "within the same species".

Propagation is nothing other than the course of cause and effect (in one word “causality”), insofar as it is the counterpart of upward-propagation; that is, insofar as it remains progression within one determinate species, line-progression within one determinate species, yet nonetheless reveals infinite diversity within that very line-progression. To the lowest order of beings belong the so-called “lifeless” things or “objects”. But the causal progression, even in these “objects”, shows infinite diversity in its determinate workings and is

therefore, at root, propagation. The most purely "objective" of objects are the crystals, in which form appears as "renounced" form (see p. 105). And yet the renunciations of crystal-form are infinitely diverse, and therefore their determinate causal workings are infinitely diverse. No two crystals are entirely the same; in no two crystals is the causal working entirely identical.

Evolution.

We have already come to know evolution as the counterpart of propagation. Propagation is *line*-life; evolution is *radius*-life. Propagation is realised cosmically as line-*orbit*; evolution, being counterpart-one with it, must therefore also be realised as radius-*orbit* or "revolution". Only in this way can evolution cosmically "intervene" in propagation. Only in this way can propagation and evolution truly be cosmically-counterpart-one.

When our formative thinking allows these counterparts to become conceptual illustrations, they can represent nothing other than the revolution, around the original cosmic centre of space, of the whole determinate elliptical plane. Only so, and in no other way, do we see the radius-revolution take place within the line-orbit, fundamentally, in the very centre of the line-orbit; only so, and in no other way, do we see the radius-revolution

perform within the line-orbit its own radiating act: ascent, expansion, evolution.

The revolution of the determinate elliptical plane around the cosmic centre of space is an absoluteness of the seventh order: it adds yet one more relativity to the previous absoluteness — the radius-reality of more-or-less, that is, *intensity*. The new more-or-less in an already determinate line-movement is "speed"; the new more-or-less in an already determinate radius-movement is "intensity".

The revolution of the determinate elliptical plane around the cosmic centre of space is also taught, in the relative reality of the solar system, in that branch of quantitative mathematics known as astronomy. Astronomy thus confirms the formative conceptual illustration of this revolution. But only a formative insight can know this revolution as the cosmic foundation of evolution.

We find the absolute, cosmic evolution relatively again in every upward-creation from species to species. This upward-creation brings with it a difference in degree of the counterpart of speed — namely, "intensity". This is confirmed by modern biology. Modern biology teaches that new species arise "suddenly" (see p. 44). The "suddenness", however, in relative reality is not a matter of more-or-less speed, but rather of more-or-less intensity.

Evolution is essentially intensive, and conversely:

all essential life-intensity is evolution — sudden evolution, revolution. We call the upward-creation from species to species "revolution" when we place the emphasis on its essential, counterpart *distinction* from propagation. We call that same upward-creation "evolution" when we place the emphasis on its essential counterpart unity with propagation. That unity is just as real as the distinction. Evolution can be *true* evolution only because it appears in and as propagation.

Evolution within propagation.

The elliptical circuit is, in its cosmically determined ground, propagation that is essentially permeated by evolution. In relative reality, therefore, every elliptical circuit of a planet also brings with it an "upward-creation" from species to species. Evolution does indeed break through propagation, but it does not break it down. Every *true* evolutionary act is seized by propagation and … propagated, so that it may once more receive upward-creation into a higher species.

The lowest species on earth are the "things" or "objects" that show no propagation other than so-called non-living causality. And the very lowest are the objectified crystal-forms. But from species to species, evolution penetrates propagation itself and lifts it upward to ever higher

form, more appearance, more intensified form, more intensified appearance .... until the ellipse-line, which cosmically bears propagation, appears in the relatively ellipse-lined surface of the egg: the form that, in the relative world, carries the higher propagation or "organic" propagation.

When we look at eggs merely in isolation, we see only all sorts of irregular shapes, among which the relative spherical form is the most common. But that relative irregularity is the counterpart of absoluteness: a playful irregularity of strict absoluteness. And we have come to know that absoluteness as elliptical. Besides, the line of a spherical surface may—even in quantitative mathematics—be regarded as a particular case of an ellipse-line: an ellipse-line with infinitely small excentricity.

Every elliptical circuit of any planet whatsoever is propagation, filled with evolutionary impulse that raises it to higher propagation. This remains true even if the best data show that on many planets no higher propagation can exist such *as we know it on Earth*. Even if it is a hundred times true that the conditions for organic propagation on Earth are not realised on other planets—the elliptical circuit itself is propagation, permeated by evolutionary upward-creation toward higher propagation, or propagation of ever higher kind.

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Evolution as a direct occasion for absolutising.

Evolution, of course, appears relatively within the relative data of nature. No natural datum is absolute. Yet because evolution appears relatively in a “sudden” manner, no relativity gives rise so immediately to absolutising (and relativising) as precisely this evolutionary relativity. We already said in "Preliminary Concepts" that the transition from the relative to the absolute, and from the absolute to the relative, is “sudden.” Therefore, the characteristically sudden nature of evolution is an immediate occasion for absolutising (and relativising) or “formative” thinking. All attempts to explain evolution through gradual transitions from species to species do violence to formative thinking. For this reason, religious thought—which is formative in essence—has always vigorously resisted such attempts.

The "new" moment.

The bodily form, even prior to propagation and evolution, is grounded in the absoluteness of the fifth order. Where the form, as formative reality prior to propagation and evolution, reveals itself in “moment”-appearance, it reveals as yet neither propagation nor evolution. Its inspired act is

a moment of beauty in the appearance itself, and it continues to resonate in "formative art."

Yet propagation and evolution together also have their moment of appearance, namely in the form of the human body.

We have already learned to see that both determinate traits of the cosmic ellipse come to appearance in the human body. We did not yet know the elliptical circuit, nor did we yet know the evolving rotation of the elliptical plane. But now we know that the "still" traits of the human bodily form presuppose, formatively, the elliptical circuit and the elliptical rotation: the still, momentary appearance of these traits is laden with circuit and rotation; its stillness is *returned* stillness, renewed stillness, renewed form, renewed moment of appearance.

The form of the human body is not grounded in a new cosmic beginning-movement: it is a relativity of the absoluteness of the fifth order, or the fourth cosmic beginning-movement. Yet the form of the human body is filled with propagation and evolution in one, and shows in its essential structure the determinate traits of the determinate cosmic ellipse in which propagation circuits and evolution rotates. Wherever the form (*gestalte*) of the human body appears, there too, in the very moment, propagation and evolution appear—stilled again into those traits that are, at root, "still": already determined

before all orbiting, before all evolution.

Thus the gestalte of the human body appears, as moment-revelation, in erotic love, whether we know this exactly or not. The woman beholds differently in erotic love than the man. Her beholding beholds in order to experience strength, whereas the man's beholding begins with the experience of strength: the man experiences his strength in order to come to beholding. But both are gestalte-beholding.

And precisely because the gestalte-beholding of the human body presupposes, in formative imagery, both taut evolution and supple propagation, that gestalte-beholding will be all the more filled with erotic revelation of life, the more powerfully the gestalte appears—*through taut ascent and supple forward-movement*. Taut ascent and supple forward-movement is the essence of rhythmic "dance". For rhythm is supple forward-movement with pulsating thrust.

The fresh, inspired, erotic act of beholding objectifies itself immediately upon the gestalte beheld: the erotic shining-forth of life before the normal act of pairing is the immediate act of beholding directed to the human gestalte. Afterwards it may also lead to the normal act of pairing… and the child appears as a remembrance of that first, fresh moment of inspiration. Just as the artwork appears as a remembrance of inspired artistic stirring,

so the child appears as a remembrance of inspired erotic stirring. Child and artwork are "remembrances". What the fresh beholding of gestalte creatively and immediately objectifies upon the outwardness of the gestalte beheld is, in essence, an object of sensory perception only for the creative beholder alone—both in erotic beholding and in artistic beholding.

But still …

The erotic shining-forth of life is the shining-forth of a human gestalte-appearance. It is thus the shining-forth of propagation and evolution in one—or: the shining-forth of evolution, filled with all the pre-movements of evolution.

In erotic beholding of the gestalte, therefore, the whole cosmic life appears, represented in one relative instance. And the immediate, inspired act of beholding therefore works through that instance in a counterpart-bearing way, and images the whole Kosmos through itself. Erotic gestalte-beholding is *cosmic evolutionary thrust, come to determinate humanity*. Every erotic act of gestalte-beholding thrusts, in formative imaging, the whole Kosmos upward towards ever more intensive expression in all human bodies. No erotic experience, of any human being, is ever lost for other human beings.

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VIII.

THE THREE SPHERES.

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The cosmic movement of evolution as the “last” beginning-movement.

With the six cosmic beginning-movements, the absolute construction of the whole Kosmos has been formatively explained. And all the relativities of the solar system are formatively understood through the formative knowledge of these six cosmic beginning-movements. For all relativities of the solar system are but capricious playings of the strict, absolute Kosmos.

And in the cosmic evolutionary movement all other cosmic pre-movements are formatively “taken up”. The cosmic evolutionary movement is the whole cosmic construction in one. It is filled with the whole Kosmos.

After the cosmic evolutionary movement there is therefore no beginning-movement “in addition”. But it does bring with it one further determination of the ellipse, which we have not yet discussed, and which we shall now learn to know as the “supra-elliptical sphere”.

The supra-elliptical sphere.

Cosmic evolution does not only penetrate the “body” in order to make it appear ever more intensely as the objective manifestation of the one appearance-impelled Creative Force. It also penetrates the

entire cosmic foundation of the body — the foundation which fundamentally externalises itself as *the determinate elliptic line*. It does not cause that line to disappear, any more than it causes the lower evolutionary stages of bodies to disappear. But it creates within that determinate elliptic line a higher stage of determinate line.
The indeterminate *circle*-line is the first outwardness of the Kosmos; therefore the whole Kosmos must come to its highest determination in a determinate *circle*-line. Only thus will that determination be a true supreme revelation — a closed revelation of the first cosmic beginning-movement or of the cosmic Principle. Only thus do we behold the cosmic construction completed, from determination to determination, borne by the appearance-impulse of the one appearance-impelled Creative Force.

The secondary focal point as the cosmic point of evolutionary engagement.

In the primary centre of the cosmic ellipse, propagation is founded (see pp. 157–158). Evolution — the counterpart of propagation, and realised again within the same determinations of that ellipse — must therefore be founded in the secondary focal point, as counterpart to the primary. In that determinate point the evolving Creative Force must, in formative logic, "take hold" in order to accomplish the final beginning-movement: evolution. From there it sets the entire elliptic

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plane into revolution about the primary cosmic centre, in order — through a determinate ray-revolution — to intervene in the determinate line-circuit of propagation.

The secondary focal point as the new cosmic centre of space.

But the secondary focal point also radiates and outlines itself. For this point is utterly real; it is the supreme cosmic point. In that point, therefore, the evolving Creative Force must not only "take hold," but this point must also be the centre of the final determination of the ellipse: the determinate circle-line, the supreme fundamental outwardness to which the indeterminate circle-line of cosmic space in the first beginning-movement must at last come.

The three spheres.

Thus we must distinguish three essentially different lines within the ellipse-movement. We shall call these lines spheres, because they are not merely lines, but bearers of different fully-absolute and relative realities which they constructively bring with them:

1. the elliptic sphere: a *determinate* line, the cosmic-fundamental bearer of plastic propagation and evolution..

2. the *supra*-elliptic sphere: a *determinate* line, a *circle*-line, the final cosmic foundation of the final beginning-movement.

3. the *sub*-elliptic sphere: it is the indeterminate circle-lining of the first beginning-movement; in it there is as yet no plasticity — it lies "beneath" all plastic formation, and now becomes, sub-plastically, the "*under*-ground of formation", determined to a definite *direction* precisely by the final beginning-movement. For that final beginning-movement causes the whole ellipse-plane to revolve around the primary cosmic centre of space; by this, the circle-line points of the *P*-ray, within and outside the determinate-bounded ellipse-plane, "circle", in accordance with their own nature, around their own centre, the primary cosmic centre. Thus the final beginning-movement (utterly contrary!) determines the first..

Fig. VI represents the three spheres. We shall further characterise them by that figure, in their relation to one another..

Relation of the elliptic and supra-elliptic spheres.

The elliptical sphere bears, fundamentally, plasticity, propagation, and evolution.

The supra-elliptical sphere is the utmost evolutionary realisation of the elliptical sphere, and founds the ultimate evolutionary fulfilment of everything borne by the elliptical sphere. From the new centre *B* the Creative Force again sends forth all elliptical life and determines it to highest circle-line and to highest evolutionary appearance. This new determinate circle-line is distinct and

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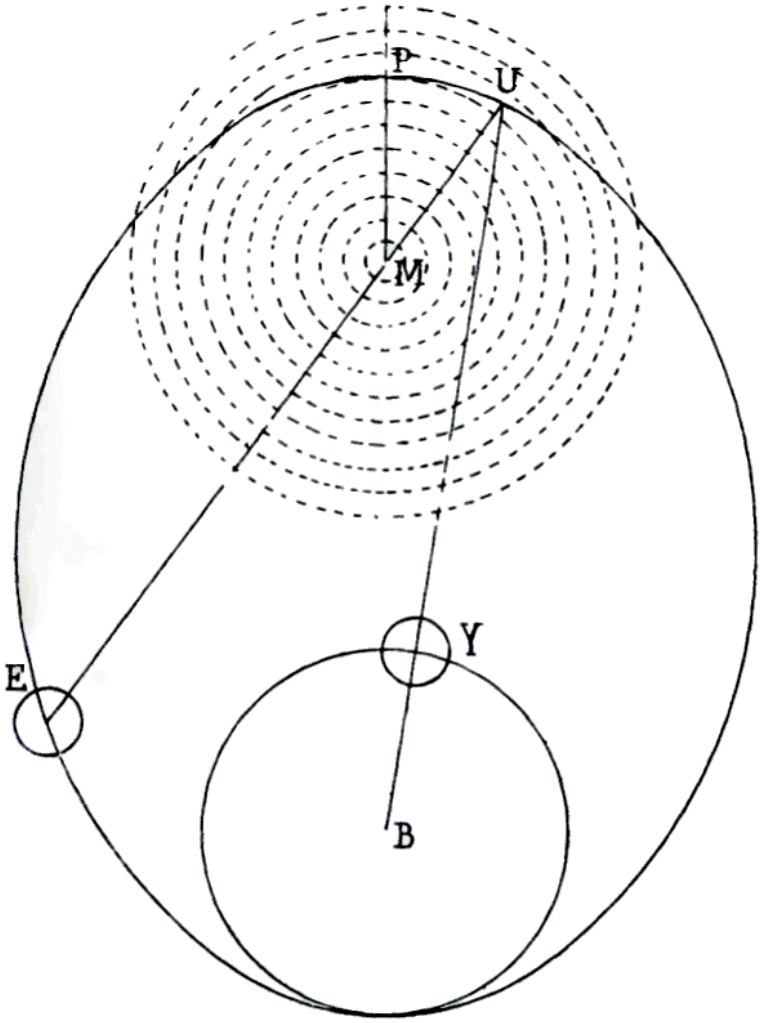

Fig. VI.

The three spheres: the elliptical (bearer of plasticity, propagation, and evolution), the supra-elliptical (bearer of the highest fulfilment of evolution), and the sub-elliptical (bearer of motoric movement).

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yet one with the determinate ellipse-line, as determinate lines can be one and distinct: as tangents (*raak*lijnen).

In absolute-cosmic reality the supra-elliptical sphere bears, fundamentally, the absolute cosmic ground-form: the spherical form — the rebirth of the spherical form that moves within the elliptical sphere — and this upper ground-form moves in counterpart-relation to its lower ground-form. This is only an apparent contradiction with what we earlier said of the circle-line: that the circle-line, as circle-line, bears no plasticity and contains no circuit. The contradiction is only apparent. The circle-line indeed bears no plasticity as circle-line, and in it no circuit is possible as circle-line. But the supra-elliptical circle-line presupposes the ellipse-line, and the ellipse-line gives to it both plasticity and circuit, in order to raise everything to highest reality. The ideal locus of the upper ground-form is, in formative terms, determined by following the formative-counterpart ray-tracts that determine the ideal locus of the lower ground-form. If we place this lower ground-form, for example, at *E*, then the counterpart ray-tracts lead us from *M* to *E*, from *M* to *U*, from *U* to *B*, and from *B* to *Y*.

The supra-elliptical ground-form is, in absolute-cosmic reality, an absolute "rebirth" of the sub-elliptical ground-form. The supra-elliptical ground-form is wholly filled with all the plasticity, propagation, and evolution of

the sub-elliptical ground-form — its “pre-form”. Everything that lives in the pre-form as plasticity, propagation, and evolution is repeated in the upper form, but everything "on a higher level," everything reborn to ultimate evolutionary realisation. Naturally, the cosmic upper form also has its relativity, which it plays out just as the cosmic sphere of the elliptical sphere plays out its relativity. The cosmic sphere of the elliptical sphere plays out into “planet”, notably our earth, and all that lives in and upon our earth. The cosmic sphere of the supra-elliptical sphere plays out into “upper-planet”. But let us wait before tracing the relativity of the upper-planet. First look carefully at the intimate-counterpart relation of upper-form and pre-form in absolute-cosmic construction:

The supra-elliptical ground-body is created as the fulfilment of the pre-form. All life of the pre-form is called, by nature called, to essentially higher life — to life in another, higher sphere. All life of the pre-form wills, by nature, to “live itself out”, and cannot do so, by nature, within its elliptical sphere. All will-to-life in the elliptical sphere must be, knowingly or unknowingly, a will toward higher life. All will-to-life in the elliptical sphere must be, knowingly or unknowingly, a “struggle” for something else, something essentially other. That essential other is not alien to elliptical life; it

is in counterpart-unity with it, and is willed precisely in and through elliptical life itself. The movement from elliptical to supra-elliptical sphere is a life-struggle toward the perfect ….

This struggle is found again on the relative elliptical pre-form that we inhabit: the earth. All that lives on earth in stretching and striving, and cannot find its essential satisfaction "here", stretches and strives toward the supra-elliptical sphere in struggle toward *essentially* higher reality. We experience this most intimately in our own humanity. We love the earth in burning love, and it is precisely therefore that we stretch ourselves and strive toward …. something else, something *essentially* other. The poets say that life on earth is "tragic" — *essentially* sorrowful, *fatedly* sorrowful — and we gladly believe them, because we find it so deeply confirmed in our own love and our own suffering. The elliptical sphere is the sphere of love-sorrow, because it is the sphere of *essentially* yet-unsatisfiable stretching and striving — of *essentially* yet-unsatisfiable love. Precisely when we love most intensely in the earthly, "of the earth earthly", then we confess unreservedly that "it is not here below." We are called to dare the ecstasy of beholding the Form. But after the "moment", that beholding again demands new stretching and striving.

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This is by no means as hopeless as it may seem at first hearing. For the formative thinker, earthly sorrow is itself the sure promise of its counterpart-uplift into the supra-elliptical sphere. For the formative thinker, truly earthly sorrow is prophetic suffering-bliss. And for the exact-formative thinker, it is certainly not necessary to seek that suffering-bliss; he finds it everywhere. But when a human being does think purely formatively, yet has not reached exactness, he especially wants to *feel*—to feel that sorrow heavy with promise—and therefore he torments himself in all sorts of ways. The self-mortification of intensely religious yet non-exact thinkers is nothing other than the intense will to feel the suffering-bliss, to feel it more and more deeply. Through such self-mortification the human being wants to feel the elliptical sphere, even though he does not, of course, "know" this. He wants the elliptical sphere to pass through him as cutting pain that, precisely in its act of torment, promises redemption.

The supra-elliptical, absolute-cosmic ground-body plays itself out as an actual upper-planet. Every planet has its upper-planet, and our earth has its "heaven". Heaven too is "relative" and evolves as well; but in relation to the earth it is the supreme evolutionary appearance.

Is this heavenly formation already directly visible here on earth—now—just as we see the earthly formation as the relativity of the absolute-cosmic body of the

elliptical sphere? — The "seer" Swedenborg beheld the new sun — the relativity of the new cosmic centre of space; he expressly characterised it as a "spiritual" sun and as the *counterpart of our earthly sun*. And he beheld heaven — the relativity of the supra-elliptic fundamental body — and expressly characterised it as the *counterpart of our earth.* Fantasy? Yes. And I readily grant that Swedenborg's fantasy was too precise and too little exact. But all beholding is *fantasy*-beholding, and only *beholding* is formatively true. Businesslike, fantasy-less "looking" sees no beelding, and what has the truly formative life to do with things that are deprived of all beelding? Such things do not exist in reality; and when we think we see them, we are merely looking in a one-sidedly sensory way and a one-sidedly intellectual way. Then we do not come to unitive beholding; then we are looking "wrongly".

Whether we shall ever be able, here on earth, to behold heaven in our *own* fantasy depends upon the intensity of that stretching and striving within us which we experience as being, on earth, *essentially* incapable of satisfaction. Burning love for the earthly, essentially accompanied by the insight that love is, in its essence, unsatisfiable on earth — that is the condition for seeing heaven in one's own fantasy. Swedenborg fulfilled that condition. And whether we shall ever, here on earth, behold heaven in our own *exact* fantasy

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depends on the exactness of our formative thinking, which refines and sharpens our fantasy. Persistent practice in exact-formative thinking is the condition for exact fantasy-beholding within earthly givens. That condition Swedenborg did not fulfil.

But if we do fulfil that second condition, what do we then see "precisely"? Precisely the same as anyone can see — yet "exactly", there is nevertheless a … "heaven-wide" difference. We then see through the earthly beelding with exactness, down into its deepest cosmic structure and deeper still, down to the Universal counterparts themselves, which image heaven just *as immediately* as they image the earth. Thus we behold the Universal Life itself imaging heaven upon earthly forms — even if only upon the capricious play of form in a simple candle-flame.

This second condition is, in formative thinking, an exceedingly "practical" difficulty. For it demands that we dare to know the earth with exactness, *in relation to heaven — that is, as a world essentially sorrowful*. Not everyone dares this. True courage is required (and not a merely "risking" boldness) in order to come to an exact tragic insight into earthly reality. We so readily attribute our "failures" to "accidental circumstances" or to the "fault" of others. Only when we dare to see that life is sorrowful on earth, *and that this is essentially as it must be*, only then

can we behold earthly reality as exact-counterpart to heavenly reality. Only when we dare to attribute all our earthly suffering to the sphere in which the earth must move — and thus no longer attempt to make everything "come right" on earth — only then can we *know* that heaven is reality.

On rising and descending.

Yet although the Universal counterparts image heaven just as immediately as they image the earth, the highest appearance of evolution nonetheless has its own place, just as the earth has its own. The places of heaven and earth are, formatively, counterpoised; and every change of beelding on earth and in heaven is accompanied by a passage from earth to heaven or from heaven to earth — an unceasing rising and descending.

Reduced to absoluteness:

From point to point, within its elliptical sphere, the cosmic fore-form perishes and rises again, because from point to point, together with its elliptical sphere, it undergoes essential plastic transformation.

And from point to point that elliptical transformation has its counterpart-transformation in the supra-elliptical sphere. As the fore-form dies within the elliptical sphere, it is reborn within the supra-elliptical; and as it rises again immediately after its perishing within the elliptical sphere, so does it die within the supra-elliptical.

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Found again in relative reality:

The earth continually dies and rises again in its elliptical circuit; and, counter to it, heaven continually dies and rises again in its circular circuit. The formation of heaven and earth is an unceasing life-and-death *back and forth*. Procreation and evolution continually "open" the earth-formation and continually close it. And while they open the earth, they close heaven; and while they open heaven, they close the earth again. Every dying on earth, of whatever determinate form, has its counterpart-rising into a determinate heavenly form; and conversely, every birth on earth is a rising-again of a deceased heavenly form. The formative rapport between earthly and heavenly forms is identical with this continual dying and rising *back and forth*. This is the exact expression of the mystery of life and death, freed from all precisions of astral or other “planes”. This is the exact expression of the mystery of rebirth or re-embodiment or reincarnation, freed from every precision concerning memories of former lives on earth.

And we all "feel" this mystery, at least, even if we have never learned to express it exactly: therefore we find life and death “holy”.

We all "feel" this mystery, at least, *as mystery*. Whoever turns it into a scientific “specialist problem” violates this feeling in its growth toward truth.

For formative mathematics there are no “problems” any more. Not because it is so clever that it has already solved all problems, but because it "knows" that life and death are not a problem, but a mystery.

Human vocation.

The vocation of the human being on earth, as human, is not “to get into heaven”. We all come into heaven anyway — but together with all dying earthly forms. Dying flowers go to heaven just as surely as dying humans. Every earthly form reaches, in heaven, its supra-form, towards which it dies. Everything on earth stretches and strives toward heaven, and the unity of this stretching and striving is: "dying".

The vocation of the human being on earth, as human, is to penetrate the mystery of life and death — to penetrate it to a determinate exactness, to penetrate it in a positively mystical manner. So that he, reborn into his heavenly form, may keep formative and conscious and determinate contact with the earth. Only in this way can he also help to “found the Kingdom of God”, from heaven, *upon earth*. The earth as the Kingdom of God is the earth inhabited by human beings who know the mystery of life and death, and who therefore live in order *to die*. A “blessed death” is the sole purpose of a truly *human* life on earth. If human beings know this, the earth becomes once more a “vale -

of tears", for it continues to move within the elliptical sphere. But then all "intentional" torments — inflicted upon ourselves and upon others — disappear, because we then know our essential sorrow and no longer need to "search" for it. Among human beings on earth there would then be a relation such as the Catholic believer imagines between the "souls in purgatory". The "souls in purgatory" know that precisely their essential and unsought, their "tragic", suffering is their ascent to heaven. If human beings on earth could once know that, they would suffer *the right sorrow* — the one, tragic, promise-laden world-sorrow. We gladly bear that sorrow "here", once we truly know it. For our nature within the elliptical sphere is built for bearing that sorrow. We do not hate that sorrow by nature. By nature we hate only the pain intentionally inflicted upon us; and it takes a great deal of unripe culture to cultivate human beings into deliberate tormentors of themselves and of others.

Moreover, the earth is purgatory itself: the sorrowful world which, in and through its essential sorrow, brings with it the certain deliverance. The Catholic believer confesses that human beings on earth and the souls in purgatory are "in via", on the way to heaven. Well then — that way is one and the same way, formatively one with the earth itself: our way to heaven is the elliptical sphere of sorrow. Insight into the earth *as purgatory* is the positive fulfilment of the Messianic faith, that condition of life for

all religious belief. Courage is required for that positivising … cowardly people so readily attribute their sorrow to others, and just as readily expect their deliverance from someone else, from a Messianic individual. Very few people dare to behold the naked tragedy of life, face to face, as being essentially one with the sphere in which we move. Who dares to know that his own sorrow and his own deliverance are formatively one with his own human, natural formation in this world?

Happiness in the elliptical sphere.

We have already come to understand the formative-beholding (*gestalteaanschouwing*) as a "moment"-beholding (*"moment"aanschouwing*) of the phenomenon of evolution — the appearance that is fully ripe, containing within itself all its preceding movements. Looking back, we must now recognise that the "happiness" which accompanies this beholding is also, insofar as it occurs within the elliptical sphere, "moment"-happiness (*"moment"geluk*). Strictly speaking, within the elliptical sphere only the instant can truly be experienced — without the immediate elliptical movement, which is a movement of suffering. The moment we experience movement, temporal progression, or duration within the elliptical sphere, we begin to endure suffering. Happiness within the elliptical sphere, as absoluteness, is happiness of a single moment. I will certainly not attempt to determine how long that happiness lasts "exactly" in relative reality. But I had already placed that absolute moment-happiness into a relative perspective in

"*The Faith of the New Human*" when I wrote: "Happiness—not the everyday contentment, but the fleeting and intense festival hour, ... the singular ecstasy of all the senses, ... we can live in its afterglow for a long time, but in its full splendor, it comes only briefly; it would destroy us if it remained...." [1] This is language of precise relativisation for anyone who understands the relation between absoluteness and relativity.

"It would destroy us if it remained." — Indeed, a *lasting* formative-beholding in the elliptical sphere would mean the disappearance of the elliptical character of that sphere itself, and therefore of its very elliptical life. But even as moment-happiness, happiness is death-dealing … in the long run. For it immediately brings forth its counterpart: the stretching and striving toward the higher sphere — and this stretching and striving is "dying". And "true" dying — dying with insight into the mystery of life and death — is nothing other than thoughtful surrender to that stretching and striving, a deliberate homesickness "for above". To live through happiness in exactness is to receive, with full awareness, a definite supra-elliptical grasp that draws us "upward".

This thoughtful homesickness for a higher sphere! Is that not unbearably melancholic? No. It brings with it the one true zest for life on earth: the zest for life of the traveller-on-earth, who can endure quite a lot because he knows that he is "on a journey" to something better, and makes his time "on the road" as pleasant as possible. Whoever does not know that he is on earth

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1) Schoenmaekers, M. H. J. *Het Geloof van den Nieuwen Mensch.* 1907, p. 36.

"travelling", can only fool himself into feeling zest for life in a world that is, in its essence, a world of suffering. The one true humour on earth is "traveller's humour": the humour of "making do". Tragedy and humour are counterparts. In a reality grasped in inspection, tragedy is the sensation of heaven from the standpoint of earth. And humour is the sensation of earth from the standpoint of heaven.

The sub-elliptical sphere.

The sub-elliptical sphere is the determination of the circular line as the *underlying* structure of the ellipse. It is therefore the determination of a not-yet ellipse, and as such, no body-formation is possible within it — not even complete plane-formation. The unity of the circular plane is broken as soon as the circular plane is extended into the elliptical plane (see p. 118). In absolute cosmic reality, the sub-elliptical sphere is *direction*, determined by the rotation of the *P*-plane around its own centre. The broken circular plane around the primary cosmic spatial centre becomes, through that rotation, a *truly* broken circular plane: a circular plane of infinitely small width and infinitely great length, constantly shifting into a different "position". Thus the radius, along its entire infinite length, is continuously broken: it is "there", and in the next moment it is not "there". And the line-points of the *P*-radius are likewise, through the rotation of that radius, continuously broken:

they are “there” when the radius is “there”, but in the next moment they are again not “there”. The broken circular lines of the sub-elliptical sphere are nothing other than an infinite number of circular-line points, combined into a circular “direction”. From point to point they have the same initial direction, which is a “straight” direction, but which, through the rotation of the *P*-plane, becomes only apparently simply bent. In reality it is “broken” from point to point — broken into an infinite number of initial points of straight direction, which together describe a circular line.

This is "almost" the line as mechanics conceives it: the line of direction alone, direction of motor force alone. "Almost". There is nevertheless an essential difference between the direction-line of mechanics and the direction-line of the sub-elliptical sphere. The mechanical line, reduced to absoluteness, is an abstract “stroke”; but the direction-line of the sub-elliptical sphere is a *real* line: it is essentially integrated with real formation; it is described as the underlying ground of formation. What can be said about it quantitatively is taught in that part of quantitative mathematics called “mechanics”. Formative Mathematics merely adds the following: that it is reality and not abstraction; that although it is the minimum of formation (a broken plane!) it is nonetheless determined as the underlying ground of completed formation. We encounter the cosmic sub-elliptical sphere again in all movements,

which we call “motoric” movements. Quantitatively they are known by mechanics. We do not, of course, contradict mechanics — and mechanics does not contradict us so long as it stays within its own field. But when it begins to claim that all movements are nothing more than “motoric”, and that a world-explanation must therefore be “mechanical”, then it becomes hostile to every human being who thinks formatively; then it becomes destructive of formation. And when it further claims that its mechanical line cannot be known formatively, then it becomes hostile to formative seeing and thus also to formation itself as the object of formative seeing — and even then it is destructive of formation. The mechanical direction-line is, in reality, *formation* — formation at its minimum, certainly, but formation nonetheless. A mechanical line, as *exclusive* mechanics wishes to regard it, is no line, no formation, nothing: a quantity of nothing. Every actual motor refutes *exclusive* mechanics. For it is formation, even if its motoric movement is only minimal formation.

Religious fantasy has called the sub-elliptical sphere “hell” and filled it with all sorts of monstrosities. There is truth hidden in that image: everything on earth that is called to realise plastic formation but remains only motoric movement is destructive of formation and therefore quite naturally appears to the human imagination as a monstrosity. Remarkably, religious fantasy sees the most typical “demonic” phenomenon in

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what it calls “possession”, and what in the language of psychiatry is called “epilepsy” (the falling sickness). An epileptic attack is indeed a real relapse of bodily formation into purely motoric movement. The epileptic falls: that is, he loses the fundamental comportment of the plastic: the “hovering”, the living equilibrium (see p. 147). And his motoric activity increases sharply: in an epileptic seizure he is far more “fist-driven”, far more crudely forceful, than in his ordinary state.

There is also truth in the religious belief that hell is a necessary reality in the structure of the world, just as much as earth and heaven are. “The inhabitants of the earth,” says Swedenborg, “are stretched between hell and heaven; if either heaven or hell were to disappear, the human being would "drop dead like a stick.”

It is not contrary to Formative-Mathematical thinking that we encounter here a religious imagination of a primitive kind. On the contrary. Formative-Mathematical thought is exact, but at the same time *spontaneous*, and therefore meets everything that human thought has ever spontaneously formed — even in primitive imaginative shapes. We interpret these primitive forms, uncover their purely human content, and express that content in exact-formative language.

Motoric movements are necessary and good, insofar as they serve higher formation. And, when rightly understood, they always serve higher formation. For one

All-Power lives both in motoric movements and in higher formation. Even an age of motor-glorification such as we are now experiencing on earth will be shaped and worked-through by the one Creator. The glorification of the motor across the whole globe is necessarily connected with the glorification of quantity. That is good… in its time. Number-science and measure-science give Formative Mathematics the material for formative reflection. Wherever number and measure have first been generally celebrated, formative-mathematical thought may one day become generally widespread.

But first humanity must come to repentance — to recognise that quantitative relation is only formation in tendency, and therefore only truth in tendency.

And in order that humanity may come to such repentance, it must first experience the hellish dread produced by an exclusive quantitative science that presents itself as complete truth. Exact formative thinking only becomes possible after the conversion of exact quantitative thinking. Exclusive quantity-thinking imagined that no other relation could be known exactly except quantitative relation. Once it is cured of that illusion, it must come to true formation and to the through-formation of the exactness already acquired.

Note on the "concept of God".

The word “God” is an intimate *relational* name. With it we designate the All-Power of the universe, but

only insofar as we recognise — more or less consciously — that there is a *relation* between the All-Power and the objective world or "nature". Everyone does, in some way, believe in an All-Power, but not everyone acknowledges its relation to nature. We have already expressed that relation exactly in the chapter on the cosmic counterparts, or the absoluteness of the first order. Everything we later said was an elaboration of the relation of the cosmic counterparts — an elaboration from Universe to Kosmos, and from Kosmos to the relativity of the solar system. We must now, concerning our "concept of God", take a position against every denial of the All-Power *as relation*.

That relation is most consistently denied by "Supernaturalism". "Supernaturalism" believes that the All-Power exists *in and of itself*, and that it created nature out of "free will": it could just as well not have done so. This is God-denial pure and simple. We cannot deny the divine relation more severely than by saying that the All-Power exists *in and of itself*, that is, without relation. The supernaturalist, if he remains serious about his Supernaturalism, says: "I do indeed know that there is one All-Power, but I refuse to acknowledge it as an essential relation to nature; I refuse to acknowledge it as 'God'."

This is an infinitely stronger denial of God's essence than the statement, "there is no God." The

supernaturalist denies the essence of God *in the All-Power that he nevertheless acknowledges*, and for that reason his denial of God has the very definite character of God-*renunciation*. Someone who merely says "There is no God" expresses only a bare denial, but not renunciation in the strict sense. Strictly considered, he means only that he cannot recognise the God of the supernaturalists as God — in which he is quite right.

Directly opposite to Supernaturalism stands Naturalism in the broadest sense of the word. Naturalism denies all Supernaturalism; it denies the possibility of an All-Power *outside* nature. This denial is, in essence, a rejection of genuine God-renunciation. Formative Mathematics agrees with this denial: it is "naturalistic" in the broadest sense of the word.

"Naturalism" is again to be distinguished into "Materialism" and "Pantheism" (the belief that God is Everything and Everything is God). "Materialism" remains, in principle, with the negative denial of an All-Power outside nature, but does not concern itself with the positive question whether there is a formative relation between All-Power and nature. "Pantheism", however, explicitly says that All-Power and nature are one, and means that unity — more or less consciously — as a *formative* unity, a unity of *creation*. Formative Mathematics is "pantheistic".

Pantheism is again to be distinguished into abstract and *concrete* Pantheism. Abstract

Pantheism merely says that All-Power and nature are one, but does not concern itself with the distinctness of All-Power and nature. In abstract Pantheism the unity of All-Power and nature is a "vague" unity, in which the All-Power is not *concretely* recognised as relation, because the essential distinctness between it and nature is not noticed. The Pantheism of Spinoza is the most typical example of abstract Pantheism. Concrete Pantheism, however, explicitly recognises both the unity and the distinctness of All-Power and nature. It is, in essence, a Trinitarian faith: faith in the "radiating" All-Power, in the "radiated" All-Power that is its creation, and in the Universal-Consciousness *of* the radiating Power *toward* its radiated creation. Formative Mathematics is "*concrete*-pantheistic".

Concrete Pantheism is again to be distinguished into *contemplative*-concrete and *beholding*-concrete Pantheism. Contemplative-concrete Pantheism recognises, in principle, the counterpart-relation of All-Power and nature. But in the working-out of its principle it denies precisely *the essence* of the counterparts. In the elaboration of its principle it confuses "counterparts" with "oppositions". Because this form of Pantheism confuses counterparts with oppositions, it de-forms nature and All-Power, rendering nature and All-Power relationless — and is therefore, in its consequences, despite its principle ….

supernaturalistic. I call it “speculative” because it is only “virtually” concrete — just as a mirror represents reality only “virtually”. A mirror does not through-form reality, and neither does this kind of Pantheism. The philosophy of Hegel is a typical example of speculative-concrete Pantheism.

Beholding-concrete Pantheism also recognises, in principle, the counterpart-relation of All-Power and nature, but in its elaboration it does not make the mistake of confusing counterparts with oppositions. It "beholds" the outwardness of nature as an entire through-image of the counterpart-relation. Lived un-exactly, beholding-concrete Pantheism appears in the naïve faith in Christ as the God-Human. Christ (and all who “believe in him”, who “merge into him”) experiences the All-Power and beholds it in the radiated creation. But because this naïve Christ-faith is un-exact, it easily drifts toward Supernaturalism in its thinking, toward Materialism in its actions, and toward abstract Pantheism in its poetic feelings. Formative Mathematics is beholding-concrete pantheistic — and methodically thought through. It is a thought-through Christ-faith. It believes, in a thought-through way, in the one Universal-Consciousness in which all humans are one, *insofar as they offer their intentionality to that Universal-Consciousness* (see pp. 85–86). Formative Mathematics believes, in a thought-through way, in the reality

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of the one God-Human, who is continually working Himself out with ever greater intensity. —

Here follows a small table summarising everything we have said so far about our position against every denial of the All-Power *as relation*:

Supranaturalism

Naturalism { Materialism
Pantheism { abstract
concrete { speculative
beholding.

The concept of God in "formative mathematics" or “positive mysticism” is a positivation of the ancient concept of God found in Aristotle. For Aristotle, the All-Power is the unmoved ground-principle of movement (*primum movens immotum*). And Aristotle recognised, as its counterpart, the ground-principle of being-moved: "*materia prima*", which is "*potentia pura*" or pure receptivity. Aristotle’s concept of God is certainly not yet exact, but in the elaboration of that concept he remains *pure*: he makes mistakes, yes, but not the fundamental mistake of confusing counterparts with oppositions. Aristotle is a genuinely pure thinker-in-counterparts; he recognises pure relation — and indeed *formative* relation. Characteristic of Aristotle’s teaching is that he sees the ground-principle of distinctness in fully actualised material reality

as a *formative* or *forming* principle: the *forma substantialis*. The purity of Aristotle's mind is essentially one with his calm style, which seems so sober until we come to know how calmly powerful pure emotion can be. Nietzsche sensed Aristotle's spirit with great refinement when he said: "Truth lives only for a heart that is strong and guiltless, glad and calm, as the heart of Aristotle was." 1)

1) Attributed to Nietzsche; no direct source has been identified.

IX.

THE ESSENCE OF CATHOLIC THINKING.

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(From a lecture delivered in Amsterdam for "De Nieuwe Gedachte".)

.... And now I shall speak about the essence of catholic thinking. Here we must first of all note that it would be a great mistake to identify the essence of catholic thinking with Roman-Catholic thinking. The Roman Church is an institution of *power*, organised entirely in the manner of a state. The Roman Church has its laws, its decrees, its punishments, exactly as a state has them. Even its dogmas, as compulsory doctrines, are *state*-laws; apart from the indomitable human life that continues to speak within them—because it is indomitable—Roman dogmas are state-laws: they prescribe how the members of the Church may express their thoughts, and how they may not express them, on pain of banishment from the ecclesiastical realm.

What, then, are we to understand by Roman Catholic thinking?

All attempts, in spoken or written word, to defend the coercion that emanates from the Roman dogmas. All attempts, in spoken or written word, to reinforce that coercion, even when this is done through an apparent adjustment of those dogmas to the results of science.

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All such attempts are attempts at thinking — impure, tendentious attempts at thinking — in the service of Roman power, in the service of the Roman *state* that wishes to rule the whole world.

But that is something quite different from the essence of catholic thinking. Between the essence of catholic thinking and Roman Catholic thinking there is a difference that we can very well compare with the difference between the Dutch national character and the Dutch state. No one would ever imagine identifying the Dutch national character with the Dutch state. The Dutch people are a living, distinctive humanity, and the state of the Netherlands is a power — an instituted power — that has only an outward connection with that living humanity. It is even conceivable that, at a particular time, the Dutch national character is *opposed* to the character of the Dutch state. That is entirely conceivable. And in such a time a true Dutchman would have to say: I am more Dutch than my state. Yes, it is easy to see that we would make a great mistake if we were to identify the Dutch national character with the Dutch state.

Yet we make exactly the same mistake when we identify the essence of catholic thinking with Roman Catholicism. We make that mistake

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all too often, because we so easily forget that the Roman Church is organised entirely as a *state*. It is conceivable that, at a certain time, the essence of catholic thinking stands opposed to Roman Catholicism. And if this is not only conceivable but proves in reality to be the case, then it is quite logical that catholic, living humanity turns away from the Church and says: I am more catholic than the Church; I am more catholic than the Pope.

Let me immediately add that, in my deep conviction, this opposition between the essence of catholic thinking and Roman Catholicism really exists today, and that it is becoming more intense with every passing year. With this I have expressed a personal conviction, and I wish to make it even more personal, so that you know precisely where I stand:

My personal thinking I experience as thoroughly catholic and at the same time thoroughly anti-ecclesiastical — specifically anti-Roman. I dare affirm with full emphasis: I am more catholic than the Roman Church, more catholic than the Pope. Wherever the Roman Church seeks to set limits to my catholic thinking, I overstep those limits — not because I am not catholic, but precisely *because my thinking is so thoroughly catholic*.

Catholic thinking is a distinctive mentality, a distinctive cast of thought, a clearly recognisable thinking-*character*. Let us now consider the essence of

this character deeply into ourselves, so that we may also learn to see its relation to the New Thought which is growing everywhere and spreading throughout our much-agitated modern world.

The first characteristic of genuinely catholic thinking is: *the drive toward beholding*. The catholic human thinks not merely in order to understand, but in order to arrive at beholding — *sensuous* beholding. He believes, consciously or unconsciously, that sensuous beholding belongs to the very essence of true thinking. He believes, consciously or unconsciously, that thinking which remains mere *understanding* is only half-thinking, however deep the experience may be. He believes, consciously or unconsciously, that thinking becomes fully human only when it flares outward and becomes sensuously embodied in beholdable outwardness.

Hence all those sensuous outward forms in catholic life which so greatly irritate the strict Protestant. [1)]

The catholic drive toward beholding shows itself, for example, in the rich formation of legends that permeates catholic life — wondrous, many-coloured, and fantastical, yet always human and not dogmatic. Dr. De Vooys has shown so unmistakably in his book "*Middle Dutch Legends and Exempla*" [2)] that the catholic legends of Jesus and Mary and the "saints" are so undogmatic, and often even anti-dogmatic. Those legends are

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1) **Protestant** tradition (especially Calvinist) holds true religion to be essentially inward: a matter of faith, conscience, and Scripture alone. Catholic outward forms—images, vestments, relics, processions, and sensuous liturgy—are therefore viewed as distracting, superstitious, or even idolatrous, and as symbols of Roman ecclesiastical power. **Catholic** tradition, by contrast, sees such outwardness as the necessary embodiment of inward truth and a natural expression of the human drive toward beholding (*aanschouwingsdrang*). The tension reflects two distinct religious psychologies: one distrusts the sensuous as spiritually dangerous; the other affirms it as integral to faith.

2) **De Vooys**, Cornelis Gerrit Nicolaas. *Middelnederlandsche Legenden en Exempelen*. s-Gravenhage: Nijhoff, 1900.

certainly not dogmatics; they are human poetry — indeed, poetry of thought. They characterise the essence of catholic thinking, to which the outward coercion of the dogmas remains foreign.

The catholic drive toward beholding also shows itself clearly in the principled acknowledgment of outward gesture in religion. The catholic human believes, consciously or unconsciously, that religious thinking lives only half a life if it does not express itself outwardly. The whole modern art of expression, the modern theatre, is born from the beholding-drive of catholic life.

Protestantism does not possess that beholding-drive. It has retained a small measure of beholding from Catholicism, but *according to its own principle* it protests against it. Protestantism protests not only against all outward authority in religion, but also against every sensuous embodiment of religious thought. That is why Protestantism is inclined to reproach catholic thinking for its supposed lack of inwardness. Yet in truth catholic thinking is *of course* no less inward than Protestant thinking. But it is not *one-sidedly* inward: it recognises inwardness and outwardness as *counterparts*. The catholic human thinks in order to experience *and to behold*; the Protestant thinks in order to experience only, and rejects *in principle* every outward embodiment.

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We may certainly say, without fear of contradiction, that the *dominant* thinking after the Middle Ages has been governed by the Protestant spirit. The predominance of Protestantism in current thought is undeniable — in scientific thinking no less than in religious thinking. As a result, until quite recently, all beholding had disappeared from our cultural consciousness.

Science no longer recognised beholding, but only inspection — precise inspection — and deduction drawn from precise inspection. But inspection is something entirely different from beholding. The scientific observer "looks": he looks carefully, he notes and describes, but he does not, and according to his principle may not, arrive at true beholding. His single sense, his isolated sense-perception, may not be allowed to become formative beholding. He may not re-form anything formatively; he may only infer intellectually; he must, as "they" say, "remain sober." Beholding, however, is a kind of seeing in which beauty is also a teacher of truth. Beholding is an "inspired" seeing, which can indeed be very deliberate, yet never lapses into dry sobriety. It is due to the dominance of Protestant thinking that beholding disappeared from science, and that only precise inspection remained — inspection unrelated to beauty,

inspection unrelated to human formation.

And what became of religious thinking under the dominance of Protestantism? It turned itself, more and more, away from all outward, formative embodiment, and therefore from all beholding. At first it wanted nothing but the inward experience of biblical language, and later even the Bible was still too outward. And so religious thinking became modern theology, in which virtually nothing remains except inward morality. Modern theology culminated in righteousness and propriety. In propriety above all. Modern theology is the apotheosis of propriety. Thus beholding also vanished from religious thinking through the dominance of Protestantism, which rejects all outward embodiment — and therefore all beholding — *in principle*.

In recent times, however, this has begun to change. Everywhere voices are being raised that once again demand beholding, as a necessary factor in human truth. These voices are suppressed in the Roman Church, and just as much within Protestantism. For they are neither Roman nor Protestant: they are *catholic-in-essence*. It is also an undeniable characteristic of the New Thought, which we all profess, consciously or unconsciously, that it wishes to return to beholding and declares that thinking without beholding is only half-thinking. Naturally, the beholding

of the New Thought will be different from the beholding of the Middle Ages. It will be more precise, clearer, more positive; it will dispel the vague mists of the Romantic Middle Ages and begin to see life in full daylight. And yet, it is certainly a beholding-thought; and therefore it is, in essence, reborn-catholic — and all the more so the more strongly anti-ecclesiastical it becomes. The New Thought is full of mystical life precisely because the drive toward beholding lives within it. For what it wishes to behold is precisely that which, by its nature, can only be beheld and never merely understood: namely, mystical life, or the mystery of life. The essence of the New Thought may therefore be characterised as "positive mysticism."

With this the relation of genuinely catholic thinking to the New Thought is stated. The New Thought is catholic in character and, for that very reason, anti-ecclesiastical. It seeks beholding — but new beholding. It seeks clarity and therefore freedom, an open view and a broad horizon. The New Thought is a fully human mode of thinking because it does not neglect beholding, which belongs to the human being. The New Thought thinks through the whole human being, including his sensuousness. And because it thinks through the whole human being, it will also be able to create a general life of thought — a new general culture of thought. Thus it will at last

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make the word catholic true again. Because catholic means one *and universal*.

The *second* characteristic of genuinely catholic thinking is *religious nature-symbolism*. This characteristic is closely connected with the first; it is a broadening and deepening of the drive toward beholding. Religious nature-symbolism is beholding-drive that objectifies itself into an explicitly religious confession. It is a beholdable confession in which the human being expressly declares that he believes himself to be one with the whole of nature, and therefore also with the Creator of nature. Religious nature-symbolism is a beholdable confession in which the human being expressly declares that he is healed of all degeneration in proportion as he penetrates more deeply into the simple, foundational life of nature.

Now the worship of Catholicism is venerably old, and therefore it keeps to the ancient conception that the fundamental life of nature is a life of four natural elements: water, air, earth, and fire. Every unity of these four elements is solemnly demonstrated in Catholic worship, solemnly made beholdable, in order to confess that from the fundamental life of nature there proceeds a divine-purifying and divine-strengthening influence.

Water is symbolised in baptism. What the catholic human experiences in this is

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the same as what Oscar Wilde felt when he wrote in prison: I shall be healed of my degeneration when I once again see the simple elements of nature — for example, the sea. [1)]

Air is symbolised in incense. The airy and fleeting character of incense-clouds is a confession of the catholic human being, who acknowledges the lightness and transience of his small individuality in relation to the Power that through-forms the All.

Earth is symbolised in the consecrated oil, used for example in priestly ordination. The oil speaks of the richness of the earth — its fertility, its strength.

And fire, finally, is symbolised in the flame of the candle. The play of the flame — which, for all its capricious changeability, remains one flame — confesses the one divine Life that burns in thousands of different forms and yet is one, eternally one.

Will the New Thought also have its own religious nature-symbolism? Will it, in this respect too, be catholic in essence? Certainly; for it too wishes to confess, in a beholdable way, that the human being is healed of all degeneration — and above all of all false thinking — in proportion as he can penetrate more deeply, in beholding, into the simple, fundamental life of nature.

But just as surely, the New Thought will demand a different religious nature-symbolism from the

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1) Schoenmaekers attributes this line to Oscar Wilde, though no direct source has been identified. The closest parallels appear in *De Profundis*: "I have a strange longing for the great simple primeval things, such as the sea," and "The sea … washes away the stains and wounds of the world."

venerably old worship of Catholicism. The New Thought will require a positive, exact nature-symbolism, one that enables us to penetrate, in exact-beholding, into the essential structure of Kosmos and Universe. In other words, the New Thought will require a *constructive* symbolism that gives *structure* to explanatory thought. And this constructive symbolism will express itself constructively: in formative *figures* that articulate *relations*. The science of this constructive symbolism will be the science of the formative figure, or: Formative Mathematics.

Figure-symbolism, then! I have already spoken at length about what we are to understand by figure-symbolism, and I trust that you will not confuse formative figures with "graphical representations." But now observe how figure-symbolism is the very essence of reborn-religious, reborn-catholic nature-symbolism.

Figure-symbolism will be able to restore to catholic thinking what it has lost in and through the Roman Church. Although the Roman Church is something entirely different from Catholicism, there is nonetheless also a connection between the two: the Roman Church is a degeneration of Catholicism, and, like all degeneration, the result of a misguided attempt. Catholicism attempted to experience human truth *upon a firm*

foundation. And that, as such, is certainly not to be condemned. It was precisely this striving that led a noble spirit such as Vondel [1)]—averse to all ecclesiastical hair-splitting—to join that Church which offered him a "truth like a rock." But Catholicism sought a firm foundation in *coercion*, in the dogma *as coercion*. That was wrong. In coercive dogma the catholic life "stiffened"; it became "solid," yes, but with the solidity of "crystal": renounced formation, a minimum of formation. The true foundation of human, formative truth is the formative figure. It protects us, without any coercion, from the two greatest dangers that can rob our formative thinking of all firmness: *vagueness and sentimentality*.

The formative figure protects us from vagueness. It shows us whether our formative conceptual presentation is so sharp that it may rightly be called "sharply-drawn," and can therefore outwardise itself in a visible, simply controllable formative act — an actuality of itself.

The formative figure also protects us from sentimentality. The danger of sentimentality lies very close at hand whenever we express thoughts about life, which are always religious thoughts. Little moonlight-feelings lurk about as soon as we begin to speak of life-relations that are in no way "businesslike." Well then, there is no danger of sentimentality once we see and explain exact figures. Which does not mean that the exact

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1) **Joost van den Vondel** (1587–1679) was the foremost poet and dramatist of the Dutch Golden Age. Born into a Mennonite family, he converted to Roman Catholicism in 1641—a move that he himself understood as seeking a "truth like a rock." Vondel's tragedies and religious poems express a profound moral seriousness and a longing for spiritual firmness. Schoenmaekers invokes him here as an example of a noble, independent spirit whose search for a stable foundation of truth led him to Catholicism, even though, in Schoenmaekers' view, that foundation later solidified into coercive dogma.

figure kills feeling. But the only feeling that can animate us in meditating upon an exact figure is the powerful emotion of the one Life itself. For the one Life is, in its deepest stirrings, *figure*: the one Life is, in its deepest stirrings, formatively mathematical in structure. —

Protestantism attempted to free itself from the stiffening influence of the Roman Church. This was originally, against the Roman Church, a *catholic* attempt. But it failed, and we all know by now that it failed. Just as catholic thinking "stiffened" in the Roman Church, so it "disintegrated" in Protestantism. In its zeal to protest against the stiffening of the Roman Church, Protestantism soon began to protest against Catholicism itself — that is, against the religious drive toward beholding itself. Thus it became in truth anti-catholic, instead of anti-Roman. And now it rejected, in principle, the unity of formation that belonged to catholic life: it broke apart into the "private inspiration" of the Spirit, through which the religious community of human beings disintegrated into a mere "association" of individuals. The modern phenomenon of associations is an outflow of Protestantism. Among human institutions there is nothing so typically a "disintegrated unity" as precisely this association-structure. The individual can indeed be inwardly one with the multitude of human beings to whom he gives the life that wells up out of his solitude. But an "association" — the

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deliberate coming together of people without an inner-and-outer, *counterpart* relation — is precisely the opposite of true, formative unity. [1)] Protestantism will become *reformed* Catholicism, *reborn* Catholicism, only when it again desires beholding, in its own free and new way; and that new way is the way of exact figure-symbolism.

The New Thought will only become real when it is actually lived. It must

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1) I distinguish three ways in which *counterpart*, or *formative*, unity can exist from human to human:

1st. *Sexual* Unity: Here the man is the "giving" or "fertilising" part, and the woman the "receiving," the "being fertilised."

2nd. Unity of *faith*: This unity is realised when a person "points the way" in such a manner that others *freely* and *inwardly* believe his "pointing," because in his explanations they see nothing other than a clarification of what they had already felt vaguely. The person who points the way — the "wise" one — is then the giving part, and those who "believe in him" are the receiving part.

3rd. Unity of *authority*: This is a human–motoric unity. The one who commands is here the giving part, and those who "obey" him are the receiving part. Insofar as this unity of authority wishes to be recognised as a *minimum* of formation, it *serves* the higher unity of faith. But when the motoric unity from human to human presents itself as if it were unity of faith (as in fact happens in the Roman Church), it becomes the opposite of unity of faith and kills that unity, reducing it to outward uniformity alone.

show itself in a way that is inwardly grounded, clear, free, simple, and strong. Only then can it *take root* in humanity.

It will not spread as an idea alone, but through the way people *relate* to one another. It will begin with a small inner group—an *esoteric* core—and later grow into a wider, outward—*exoteric*—movement.

This inner group already exists. It is growing quietly in individuals who reflect deeply and seek inward understanding. They are not bound by rigid Catholic forms, nor by fragmented Protestant thinking, but are inwardly free. The wider world resists this. Catholic and Protestant traditions may oppose each other, but they agree in one thing: they suppress the free search for direct, clear insight. And in a way, this resistance is necessary. For true insight—real, direct seeing into reality—is not easy. It is intense, even painful. The opposition people face, whether through ridicule or suspicion, actually deepens and sharpens this inner experience. In this sense, even those who resist it are playing their part—"they know not what they do." This movement does not fight back. Instead, it responds by seeing reality more clearly

and expressing that clarity more openly.

Eventually, the inner work will break through into the outer world. This will happen suddenly, as a new kind of shared understanding—a new culture. This change will not come from theory, but from real events. These events will grow out of a hidden life of thought and will carry a powerful, shaping force.[1)] Trying to predict these developments is like trying to know what a child will look like before it is born. Creation never fully knows what it is producing until it is complete. True creativity means trusting life—life that has been deeply seen and experienced. In this spirit, the inner thinker gives themselves over to a greater creative force. What is formed inwardly will, in time, become reality. And when that happens, people will come to see that earth and heaven belong together—they are "counterparts" of one another.

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1) The true inner—esoteric—unity between people is unity of *faith*. The true outward—exoteric—unity between people is unity of *authority*—but only when it is recognised as a *minimal*, *serving* formation. Authority always arises from real events and carries a kind of human, dynamic power. Authority is truly formative only when it directs action in the *service* of a higher formation.

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